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*No man who hath tasted learning but will confess the many ways of profiting by those who, not contented with stale receipts, are able to manage and set forth new positions to the world: and, were they but as the dust and cinders of our sect, so long as in that notion they may yet serve to polish and brighten the armoury of truth, even for that respect they were not utterly to be cast away.—MILTON.*

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No. CXV.

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ART. I.—MUHAMMADAN PHILOSOPHY.

- 1.—*Documenta philosophicæ Arabum.* A. Schmoelders. Bonnæ : 1836.
- 2.—*Recherches sur les anciennes traductions d' Aristote.* Par A. Jourdain. Paris : 1843.

IT must be owned that it is now somewhat late in the day to offer a review of the books named at the head of this page ; but perhaps the comparative rarity of the books themselves, at any rate in this country, and the interest of the information they contain, may be considered to furnish a valid excuse for reverting to them so many years after their publication.

Gibbon, following Pocock and others, has narrated the leading circumstances of that remarkable renaissance of Greek philosophy which took place amongst the Muhammadans in the eighth century of our era—the second of the Flight—and how this resuscitated philosophy, following in the wake of victorious Islam, found a second home in Spain, and thence spread through the schools of Western Europe, giving a new stimulus and bent to the intellectual life of our ancestors ; but it has remained for subsequent enquirers to fill up the details of the narrative ; to trace the exact dates at which, and the channels whereby the documents of Greek philosophy found their way into Arabic, to specify the particular Greek works which were so translated, to determine the amount of progress made by the Muhammadans in philosophy and estimate its influence on their literature and theology ; to fix the exact share which the Muhammadans had in introducing philosophy to Europe ;—finally to estimate the amount and character of their influence on European thought.

It has been said that it is the work of one age to put questions, and of another to find the answers to them ; and it must be admitted at the outset that the time has not yet come at which anything approaching to exhaustive answers to all these questions can be given. As Dr. Schmölders often warns us, materials for a full account

of Muhammadan philosophy are not yet available ; and moreover, the knowledge of the materials which exist, and the ability to draw correct inferences from them, are seldom found united. "To follow the mere Arabic scholar," says Professor Maurice, "who has no knowledge of philosophy, is unsafe, for he may overlook shades of meaning and put a popular sense upon technical words which would often lead us into gross misrepresentations. To follow the modern interpreter who comes armed with all the philosophical apparatus of the last hundred years is more unsafe still, for he reads himself into the old times and finds Kant or Schelling in Alfarabi or Avicenna." Dr. Schmölders however, seems, as far as we can judge, to combine a knowledge of Arabic with a competent insight into the mysteries of philosophy ; and his conclusions, of which we proceed to give an account, would therefore appear to be thoroughly trustworthy. The above remarks have more especial reference to the questions regarding the philosophical doctrines of the Muhammadans, and their historical antecedents and consequents in Greece and in Western Europe respectively, to the elucidation of which Dr. Schmölders has more particularly addressed himself. M. Jourdain's labours\* are chiefly devoted to ascertain the dates at which the Arabic versions of Aristotle's works became known in Western Europe ; and he may be said to have fairly exhausted that branch of the discussion.

The knowledge of the Greek language seems never to have been wholly extinct in Asia, from the time of Alexander's conquests and the establishment of the Seleukian and Baktrian empires down to the era of the Abbaside Khalifs. Points of contact between Asia and Europe were constantly recurring ; in the wars of the Parthian Arsacidæ with Rome ; in those of the Sassanian kings Shapur, Bahram, Kobad, and Khosrú, with the Emperors Julian, Theodosius, Justinian, and Héraclius ; in the various settlements of the Nestorian Christians throughout Mesopotamia,\* Persia, and Khorassan ; in the Episcopal seats at Mosul, Nisibis, and Seleukia ; in the resort of Greek Philosophers and Physicians to the courts of Nushirvan and Khosrú Parviz, and to Arabia. The existence of a widespread knowledge of the Greek language in Asia is further proved by the inscriptions on the Baktrian coins, by the parallel Greek and Pehlevi rock inscription at Naksh-i-Rustam, ascribed by De Sacy and Haug to Ardeshir Babegan, the founder of the Sassanian dynasty (226 A.D.), and by the prohibition of the use of Greek in public documents by the Khalif Walid. But it was not till the eighth century of our era that Greek philosophy was studied by the Arabs. Jourdain's account of this is to the following effect :—

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\* Redekünste Persiens, p. 2.

Down to the period of the fall of the Omniad Khalifs (about 750 A.D.) the learning of the Arabs was, as we know from 'Abul Faraj, confined to an acquaintance with the laws of grammar and prosody, and with the motions of the heavenly bodies. But when the descendants of Abbas came to the throne a remarkable change took place, and the unprecedented spectacle was seen of a people who had hitherto lived only to fight and to propagate their faith devoting themselves all at once to the cultivation of the sciences, and literature. The cause of this change is to be sought for in the manner in which the Abbaside dynasty established itself on the throne. During the rule of the Omniads, the descendants of Abbas had found an asylum in Mesopotamia, Persia, and Khorassan, where they passed their time in religious and literary pursuits. In these countries, they came into contact with the Nestorians whose schools were then in a most flourishing state, being attended by many natives of Persia, a country whose people have always shown a strong taste for the subtleties of metaphysics and for scientific discussions. 'In Baktria,' says Von Hammer,\* 'and in Transoxiana the sciences and arts were never strangers, and from times most ancient to the latest the lands on this and on that side the Oxus were a favourite abode of the sciences and of their admirers. The great cities of Bamian, Balkh, Merv, and Bokhara were so many foci of culture. \* \* \* \* Herein the spirits of East and West came into contact, and hence Greek science became as much at home in Persia as Persian luxury at Constantinople.'

Jourdain continues his account in the following words:—

'The standard of the house of Abbas was first planted in Khorassan; an army mainly composed of Persians, including the Barmekides and other noble families of Baktria, advanced triumphantly to the Euphrates, and the Omniads beaten at all points at length yielded the throne to the children of Abbas. These remembering their long exile in Persia, and the aid given by Persians in their struggles for the throne, summoned men of that country to share in the dignities of the empire, and acquired imperceptibly their manners and tastes. The Nestorians came in for their share of the favour accorded to the Persians. The Abbaside Khalifs became as partial to them as they were inimical to all other Christian sects, whom they regarded as spies and emissaries of the Greek emperors. In fact the Nestorians possessed many useful accomplishments not to be found in their co-religionists. They were very skilful physicians, well

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\* Sir J. Malcolm found a colony of forty Nestorian families who had a pastor and a small church at Sennah in Kurdistan, which was said to have been settled there for thirteen centuries. *History of Persia* ii. 300.



versed in mathematics and astronomy and also enjoyed the reputation of being learned in astrology, an art for which all the earlier Abbaside Khalifs seem to have had a great fancy. Alman-sur, who had passed half his life in Persia, made Khalid the Barmekide his Vizier, and, as soon as his throne seemed firmly established, undertook the task of enriching his language with the scientific treasures of the Greeks. His worthy successors, Harun ar Rashid, who was educated by Yahya the Barmekide, and Al Mamun, who was educated in Khorassan under the care of Jafir, worked with the same ardour to enlighten the Arabs, and thus in less than a century the greater part of the scientific wealth of the Greeks passed into the language of the Koran."

It is a disputed question whether the Greek books were for the most part translated directly into Arabic, or first into Syriac and thence into Arabic. Jourdain is of opinion that some were translated directly from Greek and others through intermediate Syriac versions. Schmolders inclines to the former view, observing that most of the translators employed were Nestorians, who are known to have possessed a knowledge of Greek.

Ibn Khaldun mentions that the first book translated was the elements of Euclid by Hejaj Yusuf in the reign of Al Mansur, the founder of Bagdad, "the city of peace," about 760 A.D. Abul Faraj says that the works of Hippokrates and Galen were translated by John, son of Massavia, under Harun and Mamun. Of Mamun the same author says — "He completed the work begun by his grandfather, Mansur, and, resolved to seek science in its own home, he desired the kings of Greece to send him all their philosophical books, and when they came, he sought out competent translators and had accurate versions of them made." Mamun instituted colleges of translators, John, son of Massavia being placed at the head of the translators from Greek, and Mahom over the Persian translators. Aristotle, the "Master of those who know," occupied a large number of translators whose names are given by D'Herbelot. His writings had long been familiar to the Nestorians, who had availed themselves of arms drawn from his arsenal to combat the decisions of the Councils of Ephesus and Chalcedon. Honain and his son, Isaac, were among the first who translated Aristotle. The former is said to have lived in Greece some years, and there can therefore be no doubt that his versions and probably his son's as well were made directly from the Greek. D'Herbelot, however, mentions a statement that the 'Topics' were first translated into Syriac by Isaac, and thence into Greek by Jahia bin Aidi. Hobaish, a relation of Honain, 'Alkindi, Costa bin Luca, and Thabit bin Corrah were other noted translators.

We may say, speaking generally, that the period of translation of Greek works into Arabic lasted from towards the close of the

eighth century, to the early part of the tenth century ; though, of course, the process did not then come entirely to an end, as Averroes in the twelfth century is said to have made another version of all Aristotle's works. During this period it would appear that nearly all the principal works of the Greek philosophers, mathematicians, astronomers, and medical writers were translated into Arabic.

D'Herbelot gives the names of some fifty works of Aristotle as having been translated. Amongst them we find not only the Poetic, Rhetoric, Ethics, Politics, Metaphysics, *De Animâ*, history of animals, and the various treatises of the Organon, but also treatises on pleasure, justice, friendship, relation, &c., which, though no longer extant, are mentioned by Diogenes Laertius, and others on agriculture, medicine, theology,\* &c., which were probably compositions of later Peripatetic and Neoplatonist writers, containing, perhaps, some 'waters drawn from the inexhaustible well of Aristotle, but in vessels made by others.'

In medicine the Arabs had the works of Hippocrates on humours, symptoms, epidemics, (*Abidima*) hæmorrhoids, cupping and bleeding, &c., and those of Galen on maladies, fevers and remedies.

In mathematics the Elements (*Astacsat*), Data and Geometry of Euclid, the Spherics of Theodosius and Menelaus, the Problems of Diophantus, the Conic sections of Apollonius, the works of Ptolemy, Aristippus, Autolycus, and Archimedes including one on water clocks.

Of the later Alexandrian philosophers they had the works of Porphyry, including the *Isagoge*, those of Alexander Aphrodisias, Iamblicus, Proclus, Ammonius, Simplicius, and others.

In astronomy works attributed to Euclid, Ptolemy, Theodosius, Theophilus, Hypsicles, and Hermes Trismegistus, whom they confounded with Enoch (Idris).

They had, moreover, works on physiognomy ascribed to Aristotle and Archigenes, some lineaments of which are probably preserved in the curious chapter on physiognomy in the Akhilak-i-Muhsini, the Geography and Syntaxis Magna (*Al Megiste*) of Ptolemy, a work on botany by Dioscorides, one on chemistry attributed to Ammonius,† and the Gospel of Barnabas.

None of the Greek poets, historians, or orators seem to have been translated into Arabic, and the knowledge of Latin literature poss-

\* There is a Latin version of this by Petrus Nicolaus, made from an Arabic translation by one Abeuama.

† Chymia, according to the Arabs, was invented by Chiron the Centaur, and deals with the essences and juices

of plants. Simia from the Arabic *Sam* (a vein of metal) is the art which deals with preparation of minerals and extraction of metallic bases and was, as the Arabs say, invented by Ammonius.—*D'Herbelot*.

essed by the Muhammadans seems to have been very slight. But Pliny (Balinas) and Cicero (Ifsakar Attias) are sometime quoted, besides some writers who have not been identified such as Tutianus and Abrusan.

The numerous Greek words imbedded in Arabic indicate the extensive knowledge of Greek authors prevailing in Asia; e.g., *asterlab*, *chymia*, *canun*, *eblis* (diabolos), *zonnar*, *kaiole*, *sinud*, &c., and the vast number of purely ecclesiastical terms which might be added to this list shows unmistakeably the great influence exercised by the Nestorians in conveying the knowledge of Greek to the Muhammadans.

This brings us to the third subject of enquiry mentioned at the commencement of this article, namely, the progress made by the Muhammadans in philosophy, and its influence on their literature and theology.

To begin with logic. Dr. Schmölders gives a Latin version of a poem on logic by Avicenna, or to give him his correct name Abu Ali Ibn Sina of Balkh, who lived from 944 to 1033 A.D. With this poem may be compared the summary given in the *Book of Religious and Philosophical Sects*, written by Abul Fatheli Muhammad Sharastani of Khorassan, who lived A.D. 1086 to 1155,—\* the *Shamsiya* or 'Ecliptic' composed by a disciple of Nasir-ud-Din Tusi, translated into English by Dr. Sprenger,—and the *Kitab Soghra wa Kobra*, which may be styled the Persian Aldrich. To all these the general remark applies that they are concise in the extreme, and would be unintelligible to a tyro in logic without copious explanations. The same definitions and the same hackneyed examples recur over and over again. Taking the poem of Avicenna as a sample, we find first an exordium wherein Logic is defined after the Greek commentators as 'an instrument showing the way to attain truth.' Then follow two sections on simple words, and the five heads of predicables, taken entirely from the *Isagoge* of Porphyry, the explanations given being purely realistic. In the *Soghra* we find an indication that the nominalist view was not unknown, in the assertion of the author that 'there is no doubt that these predicables are realities (*m'ani*) and not words merely.' Then follows a section on the ten Predicaments which is simply a brief summary of the fourth chapter of Aristotle's *Categories*, illustrated so scantily as to be barely intelligible." It ends with the words, 'These be the ten predicaments. (*maculat*), and praise be to God for his bounty.' The next section on propositions condenses into 37 verses, the substance of the whole *Peri Hermeneius*, and hence, as Schmölders says, is an explanation rather of the terms used, than of what they mean. The doctrines of the

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\* There is a German translation by Professor Haarbrücker of Halle.

quantity, quality, and modality of propositions, and likewise those of opposition and conversion are treated in the same summary way, only two of the four kinds of opposition mentioned by Aristotle being given. The author next treats categorical syllogisms according to the Prior Analytics. It is worthy of note that Avicenna gives only three figures, which proves that he followed Aristotle and not Galen, as Averroes and most of the Arabians did. The *Kitab Soghra-wa-Kobra* gives all four figures, and uses the letters *Alif*, *Be* and *Jim* to denote the three terms, and from the use of these three particular letters, it may probably be inferred that the Arabian logicians, who first used these symbols, copied from some Greek commentators, who used the first three letters of the Greek alphabet for the same purpose. Another curious thing is that the Arabians place the major premiss after the minor; which is, perhaps, more in accordance with the natural order of thought, than the other method. The general rules of the Syllogism as to the distribution of the middle term, &c., are given with "singular brevity." In his section on the hypothetical and disjunctive syllogisms, Avicenna follows Eudemus and Theophrastus. The poem concludes with sections on axioms, demonstration, and definition, taken from the Posterior Analytics. The only invention in logic ascribed to the Arabians is that of the distinction of first and second intentions, which Mansel says is found in Averroes, but does not occur in the treatises under notice. It was one of the scholastic distinctions which especially tickled Rabelais' fancy. He suggested the question, *Utrum chimæra bonbinans in vacuo comedere posset secundas intentiones* and the latest Oxford logical luminaries, Whately and Mansel, are at issue as to what it means.\*

In metaphysics Schmölders gives versions of two works by Abu Nasr-al Farabi, of Farab, now Otrar, in Turkistan, who lived A.D. 900—950. The first is a short treatise on the 'matters necessary to be known before studying Aristotle,' which is composed entirely from treatises with the same title by Ammonius, Simplicius, Philoponus and others. It is an introduction to Aristotle treating of the various Greek schools of philosophy, of the names of Aristotle's works and of the end of philosophy which is defined after Plato to be 'The becoming like to God as far as human infirmity will permit.'

The "Sources of questions" is another treatise by Alfarabi on ontology or metaphysics proper. It begins with sections on the principles of knowledge and the laws of thought taken entirely from Aristotle. Then follows a demonstration of the existence of pure being, which according to Schmölders is one of great moment in the

\* The *Shamsiya* is much fuller but still over brief than the other treatises mentioned,

history of philosophy, since it is no other than the very argument which Albertus Magnus took to himself the credit of inventing. Alfarabi having attained to the conception of pure being, the serene and remote unity, void of thought and will and purged of all connection with matter, comes next to the question how the material world originated, how a Deity so restricted and limited by abstraction and immutability, can be reconciled with the activity and contact with matter necessary to explain creation. This question he answers by one form of the widespread theory of 'hypostases.' The Desatir says, God created primarily the Supreme intelligence, this produced the Second intelligence with the primitive soul and body, the Second intelligence brought forth the Third and the corresponding heavenly sphere with its soul and body, and so on down to the Tenth intelligence, namely, that of human reason. Similarly Philo, mixing probably this ancient Magian doctrine with Christian phraseology, taught that God being incomprehensible and inaccessible, an intermediate existence was necessary between him and the world, and this was the Word;—first, the Word as pure thought, and then as thought realised, *i.e.*, the material universe. Another form of this doctrine is found in what is called the Alexandrian trinity—unity, intelligence, and last the universal soul which is the cause of all activity and life. To this last Neoplatonist form of the doctrine is obviously affiliated that set forth by Alfarabi. First proceeds from pure being the First intellect, thence the Second intellect and the universal soul so often mentioned by the Sufi poets. From this arise the heavenly spheres, the four elements, the various forms of life, vegetable, animal, rational, and all the qualities of the material universe. This cosmogony, or something very like it, is also found in the notices of the religions of the philosophers and of the Sufis in the Dabistan. The doctrine of the First intelligence was sanctified to Muhammadans by the Koranic text, 'The first being which God created was intelligence;' and they identified the soul of the Second intelligence with their prophet Muhammad. Alfarabi's treatise ends with two chapters on psychology taken from Aristotle's *De Anima*, with some Neoplatonist and Muhammadan additions of no great moment. Another notice of the soul or vital principle is found in the first part of the *Akhlak-i-Nasiri* written by the celebrated Nasirudin of Tus in Khorassan, who lived from 1200 to 1273; wherein it is worthy of note that the word "metaphysics" is translated directly from the Greek as *bad at tabia*, an expression which sorely exercises the Calcutta commentator.

We have good samples of the Muhammadan treatises on moral philosophy in the *Akhlak-i-Nasiri* just mentioned; and in the *Akhlak-i-Julali* of Jani Muhammad Asaad written in the fifteenth century, of which there is an English translation.



those of duty and obligation; and philosophy becomes the hand-maid of religion. Passing to the *Akhlak-i-Julali*, we find that the religious view entirely predominates in that work. The 'end' of man is defined to be the 'vicegerence of God on earth;' and moral philosophy 'the therapeutics of the soul' is the science which teaches men how to discharge this 'trust' in a worthy manner.

The doctrine of the "mean" re-appears mixed up with a lot of Platonist associations. In the *Philebus* Socrates dwells on the 'goddess of the limit' who preserves the balance of health in the human body, harmony in music, temperature in climates, and moderate virtue amidst the wildly contending passions of the human breast. And curiously enough, though the *Philebus* was never translated into Arabic, this very same association of ideas re-appears in the *Akhlak-i-Julali*. 'There is one and the same principle,' says the author, 'which if prevailing in the attempted particles of the elements is equipoise of temperament, if in tones is pure and delightful harmony, if apparent in the gestures is grace, if observable in language is eloquence and rhetoric, if created in the limbs is beauty, if in the mental qualities is equity, of this principle the soul is enamoured wherever it harbours.'

The virtues are classed not according to Aristotle's list but under the four cardinal heads. Many of Aristotle's definitions are reproduced, and many purely religious virtues are added such as piety, faith, &c., especially in the *Akhlak-i-Julali*. In the description of magnanimity it is said, 'the last foible to evacuate the heads of the faithful is the love of place',—a commonplace of the schools re-produced in Milton's "last infirmity of noble minds." And other passages might be quoted which have passed through the works of schoolmen into Shakspeare and other dramatists.

The first part closes with chapters on the cure of mental diseases, a subject which we know from Cicero and Horace to have exercised the attention of the Peripatetic and Stoic philosophers whose works have not come down to us.

The second and third parts contain like the first many passages taken directly from Aristotle, but the general treatment of the subject is very different from Aristotle's manner. There are curious disquisitions on etiquette, and on courtly behaviour in the presence of kings, an accomplishment much more necessary in despotic kingdoms than in the republics of Greece. There is also a long disquisition on wives, wherein the authors speak with all the authority and varied experience of polygamists, and noteworthy passages on the rate at which the human race increases, the object of punishment, the origin of society, the classes in the State, &c.

Dr. Schmölders in speaking of the progress made by the Muhammadians in philosophy remarks that coming as they did, without any previous knowledge of philosophy, at once to the study of a

perfected system, they could not avoid being copyists and imitators of the Greeks. Moreover, they had not the time necessary for the elaboration of any great original system, as their philosophical empire rose and fell with the same celerity as their political dominion. And they had besides to contend with the difficulties caused by imperfect versions of the Greek authors. He cites Tiedemann as paying a very high compliment to the 'uncommon acuteness' displayed by the Arabs in their philosophical discussions, and gives as his own opinion that they elaborated and illustrated very many of Aristotle's arguments; that they even anticipated Leibnitz in some of his conclusions, that they waged the celebrated controversy of nominalism and realism probably as early as the eleventh century when it was started by Roscelin in Europe; and that they were the first inventors of many of the technical terms afterwards used by the schoolmen, such as *quiditas* (*mahi-at*), *abstractus* (*mujarrad*), *in potentia* (*bilkuwat*), and so on.

Some idea of the influence of Greek philosophy on Muhammadan speculation may be gathered from the account of the tenets of the principal sects in the Dabistan. First we have the Ilahiun or Divine philosophers; divided into the Ashrakin, pure Platonists, and Mashayin. Peripatetics or "walkers"—so-called, says the author, from following the stirrup of Arastu, when he went to wait on Sekander. Then there were the Tabi'ian or physiologists, who seem to have been the atheistic materialists or sensationalists, the Condillacs of Muhammadan philosophy. They taught that the world was composed of phenomena—"things the objects of the senses" (*mahsus*), and that there is nothing besides them. On the other hand the Dahriun whilst apparently accepting the sensationalist doctrines of the last, admitted also a future state.

When these questions were being agitated in the Muhammadan literary world, it was inevitable that Muhammadan theology should feel the influence of the discussion. At first we find, as might have been expected, that the divines tried to ignore the whole affair, on the ground that nothing of the kind had been revealed in the Koran. But as time went on, they could not escape the contagion. The new philosophical language and distinctions afforded them such convenient weapons wherewith to combat the objections raised by philosophers, and to crush heresy amongst their own class, that it was not in human nature to resist making use of them. As Tertullian says, 'the heretics provoked them to philosophize.' The first who carried philosophy into divinity were the Mutakallamin or scholastics, and of these it was said by Al Shafei that they deserved to be impaled and carried through all the tribes of Arabia. These sectaries are said to have "mixed the true faith with the belief of the Peripatetics." The science they professed (*al-Kalam*) is defined as a 'doctrine by which one is



rendered capable of confirming the truth of religion by demonstration, and of solving doubts' and in fact corresponds to the 'scholasticism' of mediæval Europe, which has been called the union of a theological matter with a philosophical method. Under their fostering care the religious sects increased and multiplied till they reached, or perhaps even exceeded the number of 73, foretold in the Koran. These debated numerous questions, which are grouped under what are called the "four bases," viz., the attributes of God and His unity consistent therewith, predestination, the promises and threats, and history and reason. 'There is no difficulty in theology, says Sir W. Hamilton, 'which has not previously emerged in philosophy,' and when we find amongst the questions debated by the Muhammadan theologians, such as the following, 'whether the attributes of God are co-eternal with and involved in His essence,' 'whether God knows by His essence or by His knowledge,' 'whether the actions of man are analogous to the products of nature,' and so on, we cannot but attribute their genesis to Greek philosophy. In fact it is impossible that such questions could have suggested themselves to minds vacant of the furniture of Aristotle and his successors.

Platonism, or we should rather say Neo Platonism, has a singular affinity with some of the mystical doctrines of the Sufis; and the Dabistan mentions an impression that "the belief of the pure Sufis is the same as that of the Platonists." This is proved by the occurrence of the doctrine of the First intelligence and Supreme soul in both systems.\* But whether the Sufis borrowed it from the Neoplatonists is a disputed question. Tholuck thinks not, and he shews that the name Sufi is not derived from the Greek Sophos as Malcolm and others thought. But undoubtedly the Sufis studied Greek philosophy, and used it in their writings. For instance in a passage of Jelaludin, quoted by Lumsden, we come across the axiom of Heracleitus that 'contraries are congruous,' though by the way it is wrongly given, and this is made the basis of a long mystical argument.

Down to the last there seems to have been an opposition between the philosophers and the divines, pure and simple. Thus even as late as 1100 the latter had influence enough to procure the condemnation and burning at Cordova of the *Ihya Al Alum*, the great work of Gazali of Tus who died in 1110; though from the account in Sale, it would seem that Gazali was very moderate in his opinions, and it was said of his great work that were Islam destroyed with all its books, it might be recovered in all its integrity from the *Ihya Al Alum* alone.†

\* Grote traces a similarity between the ideas in the *Phædrus* and in *Hafiz*. book on Gazali, which unfortunately is not at hand.

† Dr. Schmolders has written a

This brings us to the next question discussed in the works under review, namely, what share had the Muhammadans in introducing the knowledge of Aristotle to Western Europe? Jourdain sketches the history of the transmission of Arabic learning to Spain in the following terms:—

“The rapid progress of the Abbaside armies compelled the Ommiads to seek an asylum in the remotest parts of the empire. One of them escaping by a miracle the general massacre of his family reached, after the most marvellous adventures, the shores of Spain, and was there saluted Khalif. Then commenced for the Ommiads and for the Saracens an epoch equally brilliant in the annals of political and literary history. The proud sons of Ommiah who had been conquerors, savages, or fools on the throne of Damascus, appeared to renounce their barbarous manners when transplanted to Spain. This change, the result of the influence exercised by the conquered people on their conquerors, turned to the profit of the sciences. Academies were seen to establish themselves at Cordova, Seville, Granada, Toledo, Xativa, Valencia, in short in nearly all the chief towns under Saracen dominion. The Spanish Khalifs invited to these academies the most celebrated Arabian scholars, endowed them with ample revenues, and presented them with well-filled libraries. But the East was ever regarded as the well-spring of learning. In the same way as a Christian scholar, in order to gain a name, had to visit all the universities of France, England, and Italy, so the Mussulman scholar of Spain in order to make any pretensions to the title of a profound philosopher had to leave his native soil, to traverse Africa, to frequent the schools of Egypt, to reap the harvest of learning in Syria, at Bagdad, in Persia, and Khorassan. Hence, Spain could not remain in ignorance of the progress made in the sciences in the East. The study of philosophy necessarily advanced with the same rapidity in Spain as in the Eastern provinces; and the works published there quickly passed into the schools of Spain. The most famous Spanish Muhammadan philosophers followed close upon Gazali, Alfarabi and Avicenna. Averroes (Ibn Roshd) who lived after Ali-bin-Ragel, Geber, Azarghel, Aven Pace, and Jafir Ibn Tufail, died according to the common opinion in 1198 A.D.”

The old opinion was that the works of Aristotle were unknown to the scholars of Western Europe, till they had learned their ignorance from the industry of the Arabs. But this opinion was afterwards strongly combated; and Jourdain, who has gone most carefully into the evidence for and against it, has come to the conclusion that it is not true without considerable modifications. He has examined the works of the schoolmen and noted the exact

dates at which citations from each one of Aristotle's works first make their appearance. Further he has examined the oldest Latin versions of Aristotle's works and decided from internal evidence whether they were made from Arabic versions or directly from the Greek. Aristotle's works on logic were, he says, known from the Latin versions made by Boëthius in the fifth century. Up to the twelfth century the Spanish Musalmāns were known to European scholars only for their proficiency in mathematics, astronomy and medicine; which subjects were studied in Spain as in the East, before philosophy. The Christians commenced the study of Aristotle's *Metaphysics*, *Physics*, and the Arabian commentaries on logic, about the middle of the twelfth century; in the course of which Avicenna, Alfarabi, and Gazali were first translated into Latin by Gondisalve, Avendreath a Jew, Gerard of Cremona and others. Citations from these works first begin to appear in the works of the schoolmen about 1200 A.D.; and by 1272 the entire works of Aristotle had been translated. The taking of Constantinople in 1203, and the Crusades, introduced many Greek works into Western Europe about the same period; and there is no doubt that some of them at least were translated directly from the Greek into Latin. Amongst those first translated from the Arabic were the *Physics*, *Metaphysics*, *History of animals*, *plants*, and *meteors*; while the *De Anima*, the *Parva Naturalia*, *Ethics*, *Politics*, and *Rhetoric* were first translated from the Greek, though they were subsequently translated over again from Arabic,—and all these works were studied with the aid of the Arabian commentaries. Cordova alone, it was said, could solve the enigmas of Aristotle;—

*Solus Aristotelis nodosa volumina novit*

*Corduba, et obscuris exprimit illa nodis.*

The Latin version of Avicenna's works was one of the earliest books printed; and several editions appeared in the course of the sixteenth century. The works of Averroes appear to have been first translated into Latin by our countryman, Michael Scott, in the thirteenth century; of whom it was said by Roger Bacon, 'Through him the philosophy of Aristotle was glorified in the Western sphere.

Finally, we come to the question what was the influence of the Arabian philosophers on European thought. Professor Maurice seems to speak of it as if it had been a sort of religious propaganda, an effort of Islam against Christendom. But as we have seen, the Arabian philosophers as a class were strongly opposed to and opposed by the Muhammadan divines; and there is no more ground for ranking Avicenna or Averroes as missionaries of Islam, than for claiming the late Mr. Mill as a "Christian advocate." Of course the earlier students of the Arabian works were accused of dabbling in Pagan lore, and corrupting Christianity with the poison

of the Koran. Pope Gerbert\* in the tenth century, Adelard of Bath, Plato of Tivoli, Alfred de Morlay, Michael Scott and others all came in for their share of this opprobrium. But in point of fact the influence exercised by the Arabian writings, was not the influence of the Koran but that of Aristotle,—“the parent of heresies.” The process of philosophizing theology, of treating theological subjects in a philosophical manner, had of course commenced long before the Arab conquest of Spain; but the increased knowledge of Greek philosophy introduced by the Arabs no doubt lent a great impetus to this process, and this impetus is the sum total of the Arabian influence on Christian theology. That the Arabians introduced no specially Muhammadian religious doctrines is a proposition which admits of proof very nearly amounting to demonstration. In the thirteenth century the Archbishops of Paris, the chief seat of scholasticism, put forth two celebrated condemnations of the newly introduced Græco-Arabian philosophy; and in neither of those is mention made of any Muhammadian tenets. The propositions condemned related to the Divine essence, the nature of angels, the universal intellect, planetary influences, the eternity of the world, the nature of the soul, the sufficiency of morality *per se* to secure salvation, and so on,—propositions which, we venture to think, would have been equally condemned by Abu Hanifa or Al Shafei. Again, in the well-known lines of Dante it is with the Greeks and not with Muhammad that the Arabian philosophers are ranked;—

“Orpheus I marked \* \* \* \*

“Galenus, Avicen and him who made,

“That commentary vast, Averroes.’

The influence of Averroes has been discussed by M. Renan. He points out that though the doctrines of Averroes were stoutly combated, by Albertus Magnus and Thomas Aquinas, it was no specially Muhammadian tenet which roused their ire, but the Platonic or Alexandrian doctrine of the *Anima Mundi*; ‘the one common intelligence, immaterial and immortal, which still preserves its numerical unity though disseminated amongst the ‘many millions of mankind.’ The schoolmen attacked this pantheistic doctrine because it ignored personal identity and the immortality of the soul. We of course admit with Hallam that ‘this system of Averroes bore an aspect very unfavourable to natural religion,\* but we maintain this was owing to its philosophical ingredients, and not at all to any doctrines derived from the Koran. Indeed the celebrated Sufi Hosain-al-Halaj was crucified in the year

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\* He is said to have been the first to have studied algebra in the Spanish schools, and to have invented a clock. As stated before, the Arabian mathematics were studied long before Aristotle, and were not derived from him.

261 of the Flight for maintaining a pantheistic doctrine somewhat similar to this of Averroes.\* In the thirteenth century the Averroists were allied with the sceptics, but the name of Averroes was still mentioned with respect even by those who disagreed with his doctrines. Thus, Cary says Averroes is alluded to in the following passage of the Purgatorio :—

- ‘ How babe of animal becomes remains
- ‘ For thy considering. At this point more wise
- ‘ Than thou have erred making the soul disjoined
- ‘ From passive intellect.

Lord Stanhope, from whom this reference is taken, adds that Averroes was not treated quite so honourably by the painters. In a picture by Andrew Orcagna at Pisa, painted in 1335, there is a special *bolge* reserved for the leaders of mischief, wherein Averroes figures side by side with Antichrist and Muhammad. Subsequently, however, his reputation seems to have been rehabilitated ; and his followers for a long period held supremacy in the Catholic university of Padua. But from 1497, when lectures on Aristotle in the original Greek first began to be given at Padua, his influence declined ; and the last we hear of him is that his tenets were condemned by the Lateran Council in 1512.

It does not fall within the scope of this article to give any account of the achievements of the Muhammadans in the medical and mathematical sciences. But a few words on these subjects may, perhaps, not be out of place.

Lord Stanhope has given an interesting account of the influence of the Arabs on European medicine. The celebrated school of medicine at Salerno is described by Gibbon as ‘ the legitimate offspring of the Saracens.’ In 1100 the physicians of Salerno dedicated a book of medical maxims in Leonine verse to the King of England, which continued to enjoy great celebrity for many centuries. It was reprinted at Rotterdam in 1649, and it is stated in the preface that the Dutch physicians of that time had the verses of the Salerno school constantly in their mouths. The celebrated ‘ Canon ’ of Avicenna reigned supreme in all the European schools of medicine for several centuries, and was the text book in the Universities of Louvain and Montpellier in the reign of Louis XIV. A great medical authority of George I’s time speaks of it thus ; “ Avicenna is fond of multiplying the signs of distempers without any reason. He often sets down some for ‘ essential symptoms which arise merely by accident and have no ‘ immediate connection with the primary disease.’ Many of his remedies are in the highest degree fanciful. He recommends coral for the gums on account of some occult properties. ‘ *Sum-*

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\* Tholuck, *Sufismus*. 61.

*mus est corallus in confortatione gingivæ.* He shares in the common belief of his age as to planetary influences, and recommends the anointing of the weapon which inflicted the wound in the hope of healing the wound itself.

In astronomy the Arabs followed Ptolemy, who, as is well-known, explained the movements of the stars by the supposition of crystalline spheres without stint of numbers ;—

‘ Cycle and epicycle, orb on orb.’

On this point, says Lord Stanhope, Averroes greatly to his honour forsook his Grecian guide. He argues against Ptolemy’s whole system of epicycles and eccentrics which he declares to be impossible. ‘ Nature,’ he says, ‘ does nothing in vain, and it is unworthy a philosopher to suppose that she employs two instruments when a single one will effect the object in view. It is therefore needful that there should be a renewed investigation of that genuine astronomy which rests on natural foundation. In my youth I hoped that such an investigation might be made by myself. Now in my old age I despair of it, but still my observations may stir up some other man to pursue these inquiries in my place.’

Astronomy as taught by the Arabs included astrology, according to the popular opinion, for which undoubtedly there was some foundation. Probably all the leading Arabian philosophers shared the common belief of their age as to the influence of the planets on human destinies, and the course of mundane events ; and, like the Christians who studied them, were suspected of dabbling in the ‘ black art.’ As we have before mentioned, Pope Gerbert was accused of this, as also was Michael Scott. The latter is said to have been

‘ A wizard of such dreaded fame,  
That when in Salamanca’s cave,  
Him listed his magic wand to wave,  
The bells would ring in Notre Dame.’

No doubt there was a class of low impostors amongst the Arabs who assumed the garb of men of science, to cheat the ignorant and perpetrate any kind of rascality that might be desired. Sigonio mentions a Spanish Arab who came to Italy with a band of “ *ilm wallas*,” as they would say in Bombay, to poison the Emperor Frederick II. Another chronicler of the thirteenth century says that Eccelin da Romano, the tyrant of Padua and Verona, always carried about with him an Arab astrologer ‘ from Bagdad, *aspectu et actu alter Balaam.*’

As to the mathematical sciences, M. Wœpke has shown that our figures were known to Boëthius in the fifth century, having probably been introduced from India through Egypt ; and that the figures used by the Arabs when they conquered Spain were of a somewhat different form. He thinks, therefore, that they adopted

the figures they found in use in Spain, instead of having been the first to introduce them. Similarly, Dr. Hutton in one of his mathematical tracts comes to the conclusion that the discoveries of the Arabs in algebra have been rather overrated, having been mostly anticipated by the problems of Diophantus. They carried algebra as far as quadratic equations, but seem to have had no conception of the utilities of the art. In the algebra of Muhammad-bin-Musa, translated in the Oriental Translation Fund series, the only use made of equations is to solve questions of division of property amongst heirs—questions which look very intricate in the involved statements of the *Sirajya* and the English reproductions of Macnaghten and Baillie, but which, as Mr. Ramsay has shown, are easily soluble by the rules of vulgar fractions and proportional parts.

E. H. WHINFIELD.

## ART. II.—SKETCH OF THE SPREAD OF SERICICULTURE.

1. *Histoire de la Soie.* Par Ernest Pariset, fabricant de soieries, Paris; 1865.
2. *Yô-san-sin-sets. Traité de l'éducation des vers à soie au Japon, par Sira-kawa de Sendaï (Osijou);* Traduit pour la première fois par Léon de Rosny, Professeur à l'école impériale des langues orientales. Paris: 1868.
3. *Silk in India. Some account of silk in Inda, especially of the various attempts to encourage and extend sericulture in that country.* Compiled by J. Geoghegan, Under Secretary to the Government of India, Department of Agriculture, Revenue and Commerce.

THE last of the three works at the head of this article contains a sketch confessedly imperfect of the spread of sericulture generally. We propose to supplement and expand that sketch from materials which do not seem to have been available to the compiler, using his narrative where it sufficiently sets forth the facts without more than this general acknowledgment.

There can be no doubt that the north-east region of China is the cradle of the silkworm and that, in fact, the stock now existing in any country of the world derives its origin either directly or indirectly from that source. A somewhat paradoxical attempt has been made to establish a second or western origin for silk, and to assign to the appearance of silk among western nations a date so early as to preclude the supposition that it came from China. M. Pariset has, however, satisfactorily shown that this is a chimera. Admitting that there is no trace of the material in any form, much less of the worm itself, passing out of China westward before the accession of the Thsing dynasty, 249 B.C., he proceeds to enquire whether there is anything to prove the occurrence of silk elsewhere to the westward, before that date. The result is a distinct negative. Silk is not found in any Egyptian mummy cloths, the translations of the Bible which employ the word will not, in the passages where it is used, stand the test of comparison with the original, and the *ἱσθηρὴ μὴδαική* of Herodotus and Xenophon was a dress of peculiar shape and not of a special material, as M. Pariset very clearly shows from a collation of the various passages in which the phrase occurs. Indeed, the notion that the "Median costume" meant a silken garment seems to have first got about owing to a passage in Procopius, sixth century after Christ. A stray passage such as that in Tertullian, where, in his inflated way,



he writes of the Grecian conqueror clothed in silk, "*ut mollius ventilante serico,*" and thus reflects back to an earlier date the effeminacies prevalent in his own time, can hardly be looked upon as historical proof that the material was known to the Greeks or Persians of the time of Alexander. M. Pariset, however, while clearly refuting the theory of this early western origin, himself assumes a second species of bombyx indigenous to India or Persia, and maintains that though the Chinese worm was imported into these countries, it found a congener there already existing in a wild state, and that when the method of reeling was learnt from its application to the Chinese cocoons, it was only extended to the indigenous species, which thus constitutes a second origin of stock. This hypothesis is unsupported by any evidence and is framed to meet the apparent difficulty of the yellow colour of the *Persian* cocoon, and we may say the Western and Indian cocoons generally, as contrasted with the white cocoon of China. But there are authentic instances of a change of colour superinduced by or at least following a change of *habitat*. For instance the small China cocoon introduced into India by Mr. Frushard towards the end of the last century in a few generations lost the greenish tinge which characterised it, and became in point of colour hardly distinguishable from the species or variety which it was intended to supersede. And Captain Hutton maintains, though perhaps on insufficient evidence, that the Chinese cocoons were originally yellow. It cannot, however, be denied that the idea of obtaining a textile fibre from the cocoons of the bombycidae was known to the Greeks of the age of Alexander, for Pamphila, daughter of Latous of Cos (*"mulier \* \* \* non fraudanda gloria excogitatae rationis ut denudet feminas 'vestis'"*) is expressly mentioned by Aristotle (whom Pliny follows) as the discoverer of the way to weave the fine "*bombycia*" which afterwards afforded so ample a field to the satirists of the luxury of the post-Augustan period. But it is clear enough from Aristotle's and Pliny's description that neither the insect of Cos nor that of Assyria (of which Pliny speaks) was the mulberry-feeding silkworm or bombyx worm. In fact Mr. Pariset's assumption of a second origin is at once unproved and uncalled for.

China, then, must be the sole starting point in any history of sericulture. The Chinese historians carry back the cultivation of the mulberry and the breeding of silk worms to the period of myths. If they are to be believed, the art of silk reeling was known in China in the time of Fouh-hi, a century before the date usually assigned to the biblical deluge, and the Empress Si-ling-chi, wife of the celebrated Hoang-ti (some 2,600 years before the Christian era) did not disdain to share in the labours attending the care of the insect, as well as in those of the loom, the invention of which

seems to be attributed to her and to have raised her to the position of a tutelary genius, with special altars of her own. According to M. Pariset, however, it is the invention of the art of *reeling*, that is attributed to this empress, or to her daughter, and the previous mention of silk as used for the strings of a stringed instrument named "kin" must be referred to silk *carded* from the cocoon, as the Assamese now card the eria, not to silk legitimately wound off in one continuous filament. But whatever the precise date of the discovery, there can be no question of the very high antiquity of the knowledge of the worm and its product in China. A series of imperial edicts and a voluminous literature of practical treatises testify to the importance of the industry and to the care that was taken to foster an art which was considered, according to M. de Rosny, 'best fitted to promote the morality of the people and extinguished pauperism in the empire.' The original cradle of sericulture in China, if we are to depend on the 'very respectable authority' of the Sacred Book of the annals, included the country of 'Yeu, lying south-west of the present province of Shantung; the country of Tsing, answering to the north-west region of the same province; the country of Siu, covering the south of Shantung and the northern province of Kiang-Sou; and, lastly, the country of King, which now constitutes the province of Hou Kouang.' M. Pariset endeavours to trace the gradual spread of silk cultivation geographically within the limits of China and the extension of the use of silk from one class of the people to another. But his materials are somewhat scanty and need to be largely supplemented by conjecture. It is, however, an ascertained fact that the sign\* for silk does not enter into the names of *garments* before the time of the Tcheou dynasty (twelfth century B.C.) and it is supposed that till then its use was confined to the manufacture

\* M. Léon de Rosny gives as "*le signe le plus élémentaire de l'écriture idéographique de la Chine antique pour désigner 'la soie,'*" a character which he renders alphabetically "*mih.*" But, according to the old dictionary Choueh-wên, this meant *silk threads*. As given by de Rosny the sign looks like a rude representation of the worm. But it might readily pass into the form which Klaproth gives among the *caractères primitifs des chinois* as belonging to the sound "*yug*" and meaning *flocons de soie qui pendent du bonnet*. They look a rough form of the hank of silk. The more modern form of this "primitive character" "*mih,*"

twice repeated, is used in the older literature to designate "silk" and this doubled sign is said at the present day to bear the sound "sse," but not to carry the meaning of silk, a meaning which is now conveyed by the sounds rendered by de Rosny "*ch'ædu-tô-an,*" i. e. the symbol of each member of which may be observed the character "*mih*" entering as a component or key. Some light is thrown on the original pronunciation of the doubled symbol "*mih*" by the fact that in Corean, which enjoys an alphabet, the word for silk is unmistakably "*shir.*" The comparison of Greek *σῆρ, σηρικόν*, Latin *Seres*, and so on, is here obvious.

of flags and the umbrellas designating the various grades of public functionaries. Thus the supply must till the 12th century before Christ have been but limited, and no very large area need have been occupied by mulberry to produce it. Again, the occupation of the country now known as China by the original settlers upon the Yellow River was a very gradual matter, and it seems probable that the extension of sericulture went hand in hand with the extension of the dominion of the conquering people. Thus de Guignes seems to think that even till the time of the Han dynasty the Chinese empire did not extend south of the Yang-tse-Kiang. Speaking of the doubtfulness of any communication between China and the West before the time of that dynasty, especially by way of the sea, he writes: '*les peuples qui habitent dans les provinces méridionales de cet empire étaient encore, sous les Tcheou, des barbares qui étaient presque nus et se peignaient le corps comme les sauvages. Les chinois policés et qui cultivaient les sciences et les arts demeuraient au nord du Kiang. \* \* \* Les chinois n'étaient pas moins resserrés du côté de l'occident. Les provinces de Yun-nan et de Sze-Chuen n'ont été policées que fort tard: les habitants étaient des espèces de sauvages; et quand ils eurent été soumis à l'empire, ils conservèrent longtemps leur barbarie.*' M. Pariset concludes that till the accession of the Thsing dynasty, about 250 B.C., the area of silk production had but little extended and was still confined to, speaking roughly, the lower valley of the Hoang-ho. At any rate, from that date, the culture must have largely spread. It is a wide leap to Marco Polo. But his travels are more authentic and distinct upon the point of actual production than any inferences that may be drawn from the passages quoted by M. Pariset, however clearly they may indicate an increased consumption of silk in the manufactured form. We find, then, that in Marco Polo's time the mulberry and the silk-worm had covered nearly the same area in China as they occupy at the present day. He mentions silk as produced in abundance all along the route of his south-westerly excursion from Juju (111° E. long., 39° N. lat.) to Kenjan-fu (99° E. long., 31° N. lat.), south-west of the bend of the Hoang-ho. There is then a gap in the mention of silk in his itinerary. But it re-appears in Qui-ju (Kweichâu, 104° to 106° E. long., 26° to 28° N. lat.), a province south-east of Sze-chuen and north-west of Yun-nan. And if we follow Polo's southerly route we find silk produced in all the provinces he traversed from Juju to Fuju (Foochow, 119° E. long., 26° N. lat.). The industry now extends to the whole of China except the extreme northern provinces. Not even an approximate estimate can be made of the amount of silk produced, but, besides exporting some ten million pounds annually by sea, the yield is sufficient to clothe in silk all but the lowest classes of a population alleged to number 400

millions of souls. At the time of Sladen's expedition, the silk trade of the west of China had suffered much from the Panthay revolt in Yun-nan and Sse-chuen.

The region indicated above as the cradle of the silkworm in China lies over against the peninsula of Corea. The jealousy of the Chinese appears, for some centuries, to have prevented the secret from spreading even thither. But according to a Chinese authority\* cited by M. de Rosny, the art of silk-reeling was introduced into that peninsula in the twelfth century before Christ and spread rapidly throughout the whole region. This account is confirmed by the narrative of an embassy from China to the Corea in the years 1119-1120 B.C., which describes the nobles and the chief officers of the court, with their wives, as dressed in the same kind of silk fabrics as are still manufactured in this most impenetrable nook of the world. The Coreans seem ever to have kept themselves as much as possible aloof from the rest of mankind, and probably but little Corean silk at any time found its way into the markets of the outer world. But in the *Calendar of State Papers* published by the Record Office will be found a notice of a letter from Firando from one Richard Cocks to the E. I. Company, dated November 1614, in which, with a view to trade, he writes of Corea as a place producing "damasks, satins, taffeties and other silk stuffs." An article in the *Edinburgh Review* (October 1872) states that a small quantity of silk is still raised in the Corea and manufactured into the fabrics worn by the aristocracy and official classes.

The date of the introduction of the silkworm into Japan is somewhat obscure. But, commencing with the fifth century of the Christian era, the industry has rapidly spread. In fact the people addicted themselves to the pursuit with so much ardour that, in fear lest other branches of agriculture should be altogether abandoned, the Japanese Government has, at times, forbidden the extension of mulberry cultivation, or attempted by sumptuary laws to restrict the use of silk garments to certain classes. Sericulture has, at one time or another, spread to almost all the islands of the Japanese Archipelago. But the northern isles are somewhat too cold and the southern too hot, to be a favourable field for the enterprise. According to a report by Mr. Adams, Secretary of Legation, "the silk districts are confined to the principal island, and may be divided into three groups: the northern designated under the general name of Oshiu; the south-western including those of Echizen, Sodai, Mashita, &c; and the central, which produces the Mayebashi, Shinshiu, and other varieties of hank silks, as well as the silks of Koshu and

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\* *La célèbre encyclopédie de Mû* nérul des écrits et des sages." *Toûan-lun*, intitulée "Examen gé-

Hachoji." The opening of the ports and the demand for fresh stock, caused by the epizootic which has ravaged the silk districts of France and Italy, have considerably increased the growth of mulberry in Japan. There are no statistics of the internal consumption of silk in Japan, but the Consul at Kanagawa estimated the total yield at 135,000 bales. In 1862-63 the exports rose to about two and half millions of pounds, but this was an exceptional year. Still the average of the four following years was about 15,000 bales or more than 1,500,000 pounds, while in the two years, 1868-69, no less than £1,400,000, worth of eggs is said to have left Japan.

It was not, we may presume, till the industry had spread southward in China far beyond its original limits, that, still following the same direction, it reached the Annamite kingdoms. M. de Rosny dates its introduction there from the third century before our era, but cites no authority for the assertion. In Tonquin and Cochin China the manufacture of silk has taken considerable hold; and in the seventeenth century there seems to have been a large export of silk, both raw and in fabrics, from these countries. It is worth remarking that much of the raw silk then exported was carried by the E. I. Company to Japan, where, therefore, the demand of the manufacturers would at that time appear to have exceeded the internal supply. At the present day the silk of Tonquin and Cochin China is mostly raised in small quantities by the peasants in their own homesteads and used for home consumption; it is said to be markedly inferior to that of China. The Siamese appear to have learnt the art in the beginning of the seventh century A.D.\* but the industry made no great progress till the eighteenth century when the opening of communication with China gave a certain stimulus to it, probably by the emigration of Chinese to Siam, where other branches of industry, *e.g.*, tin-mining, owe such development as they have attained, mainly to immigrant Chinese enterprise. At the present day, according to Crawford, the industry has again fallen into disfavour and the few places where it still maintains an existence only produce a small quantity of a coarse fabric inferior to the manufactures of Java and Celebes. But some Siamese silk now finds its way to the looms of Surat and Ahmedabad. A Chinese account of Cambodia says that the worm was introduced there from Siam in the thirteenth century of the Christian era. Of the success of silk in Java and Celebes, or in the other islands of the Malay Archipelago, no very distinct record appears attainable. The Government of Netherlands India has, however, made several attempts to naturalise some of the multivoltine species or varieties of the silkworm in Java and at one time indentured (on a very small scale) upon India for the skilled labour of silk winders. No very

\* Not "B.C." as, seemingly by a clerical error, stated in "Silk in India."

decided results seem to have been obtained. In Labuan recent experiments have been made, also with multivoltine worms, and seemingly with some success. But on the whole the Malay Archipelago cannot yet be regarded as a *proved* silk region.

Into the Indo-Chinese regions the silkworm probably passed from Western China; but at what date there seems to be nothing to determine exactly. Silk is now produced in the modern kingdom of Ava, in British Burmah, and in Manipur. Into the last the industry was undoubtedly introduced by way of Burmah. Even an approximate estimate of the outturn of these countries is impossible, but they throw little silk, if any, into the great marts of Europe, the yield being in the main worked up into garments for native wear.

Everything goes to prove that silk culture found its way into India by land from the north-east, probably through the Assam valley. The distribution of the worm as we find it at the end of the sixteenth century and the subsequent spread of the sericulturist area clearly point to this conclusion. The extension is not from the coast inwards as it would have been had the worm been introduced by sea, but from the *débouchement* of the Assam valley downwards, and in fact Midnapur and Hugli, the most seaward of the silk-growing tracts, have been the last occupied. Again, the earlier worms were all multivoltines, and though these might have been transported by sea (and indeed in the eighteenth century China multivoltine breeds were actually so imported), it is far more likely that a worm of this habit should have come down stage by stage overland. Thirdly, we have the express testimony of Mr. Atkinson, Commercial Resident at Jungypore at the end of the last century, to the existence of a well-authenticated tradition that the annual worm was actually introduced from the North-East; from Sylhet, said Mr. Atkinson's informant, but in fact, I should suspect, from Assam, where the annual species or variety seems very well established.

The date of the introduction of the worm is a point much more difficult to decide than the direction which it followed. The question has at the outset been somewhat obscured by the omission to define the term "silk." For the purpose of the present enquiry let "silk" be understood to mean the product of a domesticated mulberry-fed worm, obtained from the cocoon by continuous reeling. It can be conclusively shewn that silk in that sense was not produced in India at the time of the travels of Hwen-Tsang or in the first-half of the seventh century of our era. A word "*kauseya*" indeed occurs in the laws of Manu, in the *Mahâbhârata* and in the *Râmâyana*, and is by some translators rendered "silk." The term is employed with terms admittedly designating stuffs of wool and cotton, and is declared by the commentators to mean "stuff."

made from the cocoon of a worm." Now, this "kauseya" is expressly mentioned by Hwen-Tsang, transliterated into kiao-che-ye (as spelt by Julien), and it will be interesting to collect the various passages in which the word occurs. In the description of the distribution of alms at Prayâg by King Sîlâditya, at which Hwen-Tsang himself was present, the pilgrim writes:—"Il (Sîlâditya) fit construire, en outre, plusieurs centaines de longues maisons pour y déposer des vêtements de kiao-che-ye et de coton;" &c. (vol. I., p. 253, Pêlerin Bouddhistes). Again (vol. II. p. 68) Hwen-Tsang mentions kiao-che-ye among the materials which the inhabitants of India used to make their dresses. *Ils portent, he writes, diverses sortes de vêtements, savoir, 1°, des vêtements de kiao-che-ye (kauseya), de coton, de toile, &c.; 2°, des vêtements de tsou-mo (kshauma) qui est une sorte de chanvre; 3°, des vêtements de kien-po-lo (kambala), tissus avec de la fine laine de mouton; 4°, des vêtements de ho-lu-li.\* Ces derniers sont fabriqués avec les poils d'un animal sauvage, qui sont assez fins et souples pour être filés.*" At page 189 of the same volume, speaking of the people of Tse-kia (in the Northern Panjâb) Hwen-Tsang says:—"Ils s'habillent avec des étoffes d'une blancheur éclatante qu'on appelle kiao-che-ye, et portent des vêtements rouges comme le soleil levant."

From these passages it is evident that "kiao-che-ye" cannot have been "silk" as we have, for the present purpose defined that term, or it would have been at once recognized by the Chinese pilgrim as such. In fact he does in several passages speak of silk in this sense, but nowhere as produced in India. For instance, in writing of the province of Che-to-ton-lo (which Julien renders Satadru and which General Cunningham identifies with Sarhind) he says:—"les habitants portent des vêtements de soie fine dont le haut est orné de riches broderies" (vol. I., page 364), and he expressly mentions the silk manufactures of Hotan (Khotan) and of Po-la-sse (Persia). On the other hand, though his travels extended to Kâmarûpa in the east and must have carried him through the country first occupied by the mulberry in Bengal, he makes no mention anywhere of such an industry as sericulture. Briefly, then, it may be inferred from the "*Pêlerins Bouddhistes*," (1), that the "kauseya" of the old Sanskrit texts was not silk as we have defined it, and (2), that at the time of Hwen-Tsang's travels the mulberry silkworm had not been established in India, such silk fabrics as were used being probably imported in the manufactured state from the north-west frontier or, if manufactured in India, manufactured from imported silk. The passages cited do not throw much light on the question

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\* General Cunningham, it may be this with the fine wool of the said *en passant*, is disposed to identify "gural."

what "kauseya" or "kiaoché-ye" actually was. M. Pariset contends that it was a stuff made from wild cocoons, *carded*. It may have been so, but Hwen-Tsang's description of the colour as being "une blancheur éclatante" is hardly consistent with this theory.

The following notes, kindly communicated by Mr. Blochmann, go to fix the other limit of the period within which the silkworm must have found its way to India. "The *Ain-i-Akbari* gives Todar Mall's rent-roll of Bengal for 1582, in which it is said that raw silk (*abresham*) is produced in Sirkár Ghorághát, *i.e.*, Rájsháhí, Bogra, Dinájpúr. Besides the *Ain*, we have a short description of Bengal in the *Haft Iqlm*, a little-known Persian work, written in 1591 by Ahmad-i-Rázi, a relation of Núr Jahán's father. He was in India a few years before 1591 and may have been in Bengal. He says (I translate from my MS.), 'The chief products of Bengal are rice, sugarcane, raw silk (*abresham*), arca nuts and pepper; of fruits mangoes, plantains, oranges, &c.' The author then speaks of Bengal muslius and mentions some of the Sirkáris; *viz.*—Sirkár Audambar (*i.e.*, northern Birbhúm and Murshidabad district). 'In several parganahs of this district raw silk is produced,' and 9, Sirkár Ghorá Ghát:—'This Sirkár borders on Koch Bihár (which extended in 1590 more southwards than now), and produces rice, raw silk and arca nuts.' In speaking of Koch Bihár he says:—'Koch Bihár borders on Ghorá Ghát in the south and on Tibbet in the north. People from Tibbet pass to and fro. The products of Koch Bihár are raw silk, pepper, and a kind of ponies called *tánghau*.'

Thus at the end of the sixteenth century we find the silk-growing industry established in a tract of country which may be described as including Rájsháhí, Murshidabad, Rangpur, Dinájpúr, Bogra, Koch Bihár and part of Birbhúm. To bridge the interval between this and the anterior limit given by the negative evidence of Hwen-Tsang's travels, an interval of more than 900 years, we have hardly any materials. The early Muhammadan histories are but catalogues of dynastic changes, and for Bengal there are not even such histories. The only evidence we have been able to obtain is contained in the following brief note for which we again are indebted to Mr. Blochmann:—"The *Tabaqát-i-Naqirí* (written in A.D. 1260 and printed by the Asiatic Society) mentions that when Bakhtiyár Khiljí, in A.D. 1203, conquered Koch Bihár and entered the mountains north of it, he fought with people whose armour, shields, and helmets were made of bamboo and 'were all filled with raw silk (*resham-i-khám*).' *Tabaqát*, p 153.' It would not be prudent to build too much on this somewhat vague and not very intelligible statement; but so far as it goes, it points to Assam as the immediate source of the Bengal silkworm.



and to the absence of indigenous silk in Bengal Proper at the beginning of the thirteenth century.

It seems probable that the Bengal silk at first was either worked up into plain fabrics for local consumption or was exported westward to the looms of Western and Upper India. Thus in the list of stuffs and garments in the *Ain-i-Akbari*, while the silk fabrics of Lâhor, Fathipur, Ahmadabad and Agra are described in detail, there is no mention whatever of any silk manufactures\* from Bengal. As at the present day, the Bengal raw silk had to compete with the silk of Persia and Bokhara; and in 1614 one W. Edwardes writes to the E. I. Company from Ahmadabad of Persian raw silk fetching there as much as in England. But in the earlier years of the seventeenth century the supply of Bengal silk does not seem to have been large, nor did the silk produced find favour in the European market. Thus on Christmas-day, 1619, Wm. Biddulph and John Willoughby write from "Senend (? Sirhind) in the King's Lascar, 200 coss from Agra and 100 coss short of Lahore" that no quantity of silk was to be had at Agra. Nevertheless, William Methwold writing from *Masulpatam Roads* on 7th October 1619, "hopes to furnish good quantity of Bengala silk," and on the 15th idem, Francis Fetiplace and others writing from Agra, "will send Bengala silk next year," while about the same time Robert Hughes and another writing from Patani (? Patna) say "Bengala silk bought and sent to Agra." Shortly afterwards the Company seems to have altogether interdicted the purchase of Bengal silk, at any rate for exportation by way of Surat. But, in truth, the attention of the Company about this time was mainly turned to any silk but Bengal silk. Chinese, Japanese, Siamese, Cochin Chinese and especially Persian silk seem at one time or another to have been in favour, and so early as 1604 the Turkey merchants petitioned the crown complaining of the decay of their trade into the Levant by reason of the E. I. Company's trade "whereby \* \* \* silks \* \* \* which used to be brought through Persia into Turkey are now brought direct from the Indies." But negotiations with the "Sophy" for the monopoly of the export of Persian silk came to nought, and the rivalry of the Dutch much hampered the trade in the Eastern seas, so that by the end of the seventeenth century Bengal silk came to occupy a prominent position among the Company's Indian exports.

It is not the purpose of the present paper to discuss the commercial policy of the E. I. Company. Good or bad, there can be

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\* The richer silk fabrics have never been largely manufactured in Bengal Proper. In fact the taste for these fabrics seems to be distinctly due to Mughul, or at any rate Muhammadan influence. Thus the "mushroos" and other gaudy productions of Muldah are probably relics of the splendour of the Musalman court of Gaur.

no doubt that it tended to force the production of raw silk for export and to depress indigenous manufactures of silk. Thus the cultivation was pushed on into Hugli, Midnapur, Bānkurā and parts of Nuddea and Jessor. But the extension in this direction was afterwards followed by a decay in the north-easterly districts of Dinājpur and Rangpur. The only respect in which any effective improvement had been introduced by the Company was that of reeling and drying, in fact the manipulation of the cocoon when once formed. The attempts of the Company to improve the breed of worms, to introduce new breeds, to establish a better system of rearing, or to acclimatise new varieties or species of the mulberry were not successful. In particular the attempt to establish a new stock from Italian or St. Helena eggs was a complete failure, a fact, it may be noted, which M. Pariset has quite overlooked when he endeavours to trace an intermixture with European breeds in the colour of the Indian cocoons. But, without the agency of the Company, certain eastern breeds established themselves, and the appearance of the annual worm at the beginning of the eighteenth century is a notable fact in the history of Bengal silk. This worm still yields the greater part of the March "bund" or crop. Since the Company's retirement from business in 1834 the Bengal silk exports by sea have been nearly stationary, averaging something less than one and a half million pounds a year. But, while the exports of Bengal silk have stood still, those of China have increased enormously and Japan has come into the market. Relatively, therefore, the position of Bengal in the European silk market is very much lower than it was forty years ago. The internal movement of Bengal silk to the looms of the Panjāb, the Central Provinces, and Bombay still continues, but in diminished quantity, as the manufactures which create the demand are gradually on the wane.

The only Indian province outside Bengal where silk has obtained any real footing, is Mysor. The industry there appears to have been the creation of Haidar Ali or his successor, and for many years thrived in its way. But of late a fatal epizootic has nearly destroyed the insect, and all the efforts to establish a healthy strain of worms have proved unavailing. It is not very clear whence the original Mysor stock was obtained, but it seems to be the same worm as the China worm of Bengal; and on the whole was most probably obtained from that province.

The experiments in naturalisation in the north of India, Bombay, Madras, the Panjāb, and elsewhere, narrated at almost tedious length in "Silk in India," were all absolute failures. A somewhat more promising attempt is now being made in the more congenial climate of the Dehra Dhūn. The establishment of the worm in Kashmīr is noticed further on.

So far the spread of sericulture may be regarded as a gradual movement, extending over tracts of country either continuous or only separated by narrow stretches of sea. Thus, for example, we can perceive a gradual extension eastwards and northwards through Corea and Japan, southwards and southwestwards through the Chinese kingdom or kingdoms, the countries lying on the coast of the China Sea and the Gulf of Siam, Burmah, and India. We can imagine that, however jealous of the propagation of the knowledge of the process or of the means of obtaining silk, the Chinese could by no system of prevention check this almost natural movement of the insect. But the passage of the silkworm westward is *per saltum*, a series of forced marches. Moreover the emigrations of the worm already noticed seem generally to have included, if they did not altogether consist of, multivoltine species. In the passage of the industry westward to the north of Himalaya the univoltine species or variety alone played a part. This is readily accounted for. Looking at a map shewing the distribution of sericulture, we should see a great blank between China Proper and what is now the country of the Atalik Ghazi. The great Thibetan table land has, apparently, never been the seat of silk-growing; probably because its climate is inimical to the mulberry. Only the annual worm, in the egg stage, could endure the tedious transit of this inhospitable region. Passing westward we find the insect reappear in Khotan.

At pp. 238 and 239 of vol II of Julien's "*Mémoires de Hiouen Tchang*" we find the following account of the extension of sericulture to Kiu-sa-ta-na or Koustana, a country identified apparently as Khotan:—

"Jadis ce pays ne connaissait ni les mûriers ni les vers à soie. Le roi ayant appris que le royaume de l'est (la Chine) en possédait, y envoya un ambassadeur pour en obtenir. A cette époque, le prince du royaume de l'est les gardait en secret et n'en donnait à personne, et il avait défendu sévèrement aux gardes des frontières de laisser sortir des graines de mûrier et de vers à soie. Le roi de Kiu-sa-ta-na (Koustana) dans un langage soumis et respectueux, demanda en mariage une princesse chinoise. Le prince du royaume de Chine, qui avait des sentiments de bienveillance pour les royaumes lointains, accéda sur-le-champ à sa demande. Le roi de Koustana ordonna à un ambassadeur d'aller au-devant de son épouse et lui donna les instructions suivantes:—'Parlez ainsi à la princesse du royaume de l'est: Notre royaume n'a jamais possédé de soie; il faut que vous apportiez des graines de mûriers et de vers à soie; vous pourrez vous-même vous faire des vêtements précieux.'—Après avoir entendu ces paroles, la princesse se procura secrètement des graines de mûriers et de vers à soie et les cacha dans la onate de son bonnet. Quand elle fut arrivée aux barrières, le chef des gardiens fouilla partout, à l'exception du bonnet de la princesse, qu'il n'osa pas visiter. Bientôt après elle entra dans le royaume de Koustana et s'arrêta dans l'ancien pays où fut élevé le couvent appelé *Loih-ché-keia-lân*. La princesse ayant laissé dans ce pays les graines de mûriers et de vers à soie au commencement du printemps on sema les mûriers; et, quand l'époque des vers à soie fut venue, on s'occupa de cueillir des feuilles pour les nourrir.

Dès le premier moment de son arrivée, il fallut les nourrir avec diverses feuilles. Mais après un certain temps les mûriers se couvrirent de feuilles touffues. Alors la reine fit graver sur une pierre un décret où était dit : Il est défendu de tuer les vers à soie. Quand tous les papillons des vers à soie se seront envolés, on pourra travailler les cocons. Quiconque enfreindra cet ordre sera privé des secours des dieux. Aussitôt après, elle fit construire ce couvent en l'honneur de la déesse des vers à soie. On voit encore dans ce royaume quelques troncs desséchés de mûriers que l'on dit provenir des premiers plants. C'est pourquoi ce royaume possède aujourd'hui des vers à soie et personne n'oserait en tuer un seul. Si quelqu'un dérobe de la soie à un autre, l'année suivante il lui est défendu d'élever les vers à soie."

And again under the head Hotan (Khotan) we find in Julien, vol. I. of the "Pélerin Bouddhistes," pages 381 and 382, the following passage :—

"Les habitants sont habiles à filer la soie et à en fabriquer de belles étoffes."

And again :—

"Le plus grand nombre de personnes se vêtit de soie et de coton."

From the use of the word 'filer' we may probably infer that silk was grown in Khotan in the time of Hwen Thsang. But Marco Polo more than six centuries later does not mention silk in "Cotan," though he specially notices its cotton, hemp, and other products yielding textile fibres.

Klaproth thus endeavours to fix the *date* of the introduction of the worm into Khotan :—

"La soie paraît avoir été apportée par une princesse Chinoise qui épousa un roi de Khotan. Ce fait n'est pas marqué dans les annales Chinoises qui sont en général très exactes pour de pareils événements. Il paraît, donc, qu'il a eu lieu pendant le temps de la division de l'empire, qui arriva après l'extinction de la dynastie des Tsin en l'an 419 de notre ère et cette princesse appartenait vraisemblablement à la famille des Wei Septentrionaux qui ne possédèrent que le nord de la Chine, tandis que le midi de ce pays se trouvait sous la domination des Soung."

The dates of the progress of sericulture westward from Khotan through Transoxiana are not clearly traceable. But the geographies of Ibn Haukal and Al Istakhri, which both belong to the second half of the tenth century, show clearly that sericulture properly so called was then firmly established in the provinces of Tabaristan and Jorjan on the south of the Caspian. Tabaristan was said to stand first among silk-producing countries. Yet this province yearly imported its "grainage" (i.e., the eggs for breeding) from Jorjan. Merv, too, appears at that epoch as producing silk and also as exporting eggs to Tabaristan. Thus by the end of the 10th century we find silk established in Persia, and we may presume that in its gradual advance thus far westward it had struck roots, which still bear fruit, in Bokhara, Khiva, Samarcand and generally throughout the tract now known as the Khanates.

Long before the 10th century, however, the Persians had been conversant with silk, and had in fact held complete control of the supply of the commodity to Constantinople. They had in their hands the route by India and the Persian Gulf as well as the overland traffic, and Gibbon cites from Procopius the almost fabulous rates to which the monopoly of the carrying trade ran up the price of what was then a luxury. At the present day the mulberry grows almost throughout Persia, but the true silk region lies on the south shore of the Caspian between the mouths of the Araxes and the Gorgan, or, in other words, "the provinces of Shirwan, Ghilan and Mezenderan,\* the silk of Ghilan bearing a higher reputation than that produced by the other two provinces. Shirwan is a Russian province. The industry is also carried on in the Persian provinces of Kachan, Meshed and Yezd. England, Russia and France import raw silk from Persia, but its quality is low, it being ill-reeled and irregular. The Persian silk crop of 1863-64 is said to have yielded 1,129,000lbs. valued at £734,000. Of this produce 400,000lbs. was shipped to Great Britain, 30,000lbs. to France and 141,000lbs. to Russia. Within the last few years the yield has much diminished. Indeed Sir H. Rawlinson speaks of the silk crop as an entire failure, and Consul-General Jones in his report for 1870, writes of the "destruction of the silk-trade of Ghilan." In fact the crop of 1869 was only valued at £200,000, or not one-fifth of the value of the crop of 1864, which was estimated at more than one million sterling. It is probably from Persia that silk culture spread into the Caucasus and Mingrelia, where, however, it does not seem to have attained any great development.† The sericulture of Afghanistan is probably an offshoot of that of Persia or Bokhara. Yakub Khan, son of the Ameer, was at one time said to be endeavouring to revive this industry at and around Herat as a means of putting money into his coffers. But the actual outturn of Afghanistan silk cannot be estimated. Kashmir also derives its silk from a Bokhara source. We are informed by Babu Nilambar Mookerjee, the Chief Justice of Kashmir, that the worm and mulberry were both introduced from Bokhara into the valley about the beginning of the 16th century.

\* Of this very tract Marco Polo writes:—"It is from the country on this sea also that the silk called *Ghelle* is brought." Colonel Yule notes thereon "The province of Gil gave name to the silk for which it was, and is still, famous. \* \* \* This *seta ghella* is mentioned also by Pegolotti and by Uzzano, with an odd

transposition as *seta leggi*, along with *seta masandroni*, i.e., from the adjoining province Mezenderan." *Yule's Marco Polo*, bk I., chap. 4.

† Marco Polo, however, speaks of silk being produced "in great abundance" in "Georgiania" a region which, as laid down by Colonel Yule, would include these countries.

It was not till the middle of the 6th century of our era that the silkworm was introduced into Europe. After an unsuccessful attempt to stimulate to competition "his Christian allies, the Ethiopians of Abyssinia, who had recently acquired the arts of navigation, the spirit of trade, and the seaport of Adulis (Zoulla) still decorated with the trophies of a Grecian conqueror," the emperor Justinian found by a lucky chance the means of gratifying his wish to defeat the monopoly of silk hitherto held by the Persians. This chance was the advent of "two Persian monks" who had been long resident in China, and who now offered to import the eggs of the silkworm. They were liberally encouraged by Justinian, and Gibbon relates (not without a scholarly sigh at the thought that they did not rather bring another Chinese art, and so preserve to us "the comedies of Menander and the entire decades of Livy") how they "again entered China, deceived a jealous people by concealing the eggs of the silkworm in a hollow cane and returned in triumph with the spoils of the east." "Under their direction," he continues, "the eggs were hatched at the proper season by the artificial heat of dung, the worms were fed with mulberry leaves, they lived and laboured in a foreign climate, a sufficient number of butterflies was saved to propagate the race, and trees were planted to supply the nourishment of the rising generations. Experience and reflection corrected the errors of a new attempt, and the Sogdian ambassadors acknowledged in the succeeding reign that the Romans were not inferior to the natives of China in the education of this insect and the manufacture of silk." M. Pariset conjectures that it was in fact from Khotan \* that the two Persian monks brought the worm to Constantinople. The Sogdian embassy, to which Gibbon refers, was sent expressly to negotiate a trade in silk, and Menander tells how it had been preceded by an ineffectual mission with the same object despatched to the court of Chosroes. The Persian monarch is said to have rejected the overtures of the Sogdians and burnt the silk, declaring that his country had no need of *τῆς ἐκ Τουρκῶν κατάξῃ*. But though M. Pariset infers from this phrase that silk was produced in the country of the Sogdians, or say Transoxiana as defined by Vambéry, neither the narrative of Maniakh's embassy to Justin, nor that of the embassy of Zemruchus to Dizaboul,

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\* In further support of this view he appeals to the inscription of Si-guan-fou as proving that the first entrance of Christian monks into China was in the 7th century. And one might also ask whether in those

days it would have been possible to convey eggs from even the nearest point of China to Constantinople in time to prevent their hatching on the road.

seems to prove more than the desire of the Turks then dominant on the Oxus, to promote a *carrying* trade between China and the west.

The notices of the spread of sericulture in the Byzantine empire are singularly scanty. Indeed, M. Pariset, whose industry in collecting all information is perhaps more commendable than his ingenuity in building theories thereon, expressly admits that there is no direct mention in the Greek literature of the period of raw silk as a product of the Eastern Empire, before the 11th century. M. Pariset supposes an "*industrie séricicole*" established in Syria and destroyed or maimed by the Arab incursions in the 7th century. But he seems to infer too readily from the undoubted celebrity of the silk *manufactures* of Antioch that the material was locally produced. Nor does the industry seem to have taken root in Asia Minor till a very much later date.

In the European portion of the empire the industry was of very slow growth. Indeed it seems doubtful whether the etymology which refers the name "*Morea*" to the mulberry is not a mistaken one, for it is applied to the west coast of the peninsula while the manufactures had their chief seat at Corinth, Argos and Thebes. M. Pariset clearly exposes the inaccuracy of the passage in Gibbon's 53rd chapter, which would have us to believe in the existence of a flourishing silk industry in the Peloponnesus at the end of the 9th century. In fact it is only from the narrative of the Norman invasion that we gather the prosperity of the silk manufactures of Greece, and nothing definite can be made out as to the extent to which silk was *grown*.

At any rate it seems clear that the sericulture of Greece, Asia Minor and Syria including Cyprus and Crete was originally derived from the brood imported by the Persian mouks. Silk is still produced in these regions. The total outturn of the Morca, Cyprus and Crete seems to be about 150,000lbs. annually of a silk of inferior quality. In 1836 Syria produced 856,000lbs. of raw silk, and the annual outturn of Asia Minor is said to be about 1,200,000lbs. The silk of Broussa is mentioned in the 15th century, but its present high character, due to improved reeling, only dates from the present century.

The Arabs now became the chief agents in promoting the spread of sericulture. In their hands the worm passed through the north of Africa into Spain. Strüve in his "*Handelszüge der Araber*," as quoted by M. Pariset, cites "*Abu Obaid*" to shew that the mulberry and the insect thrive at Cades on or near the north coast of Africa; a mulberry tree there was said to yield more profit than five trees in other countries, without the silk suffering. If this "*Abu Obaid*" be Abul Kasim Obaidullah, better

known as Ibn Khurdadbah, the testimony would belong to the second half of the 9th century. At any rate Ibn Haukal in the first half of the 10th century speaks of the silk manufactures of Cebes, and Edrisi in the 12th century speaks of the silk fabrics of that town (though then the industry had declined and been to a great extent replaced by the manufacture of leather), and of Kasr Sajja (three miles distant) as well as of the numerous mulberry trees round the town of Sort. The industry seems to survive in Tripoli, which in 1862 is said to have yielded 126,000lbs. of raw silk.

The exact date of the establishment of the insect in Spain is not easily to be ascertained. But Estakhri (1st half of the 10th century) speaks of silk as among the products of the country and Edrisi expressly mentions the sericiculture of Jaen. "Jaen," he writes, as translated by Jaubert, "est une jolie ville. \* \* Il en dépend trois mille villages où l'on élève les vers à soie." In the Iberian peninsula the industry still survives or did till lately survive. In 1843 Spain produced about 2,000,000lbs. of silk, of which Valencia yielded three-fifths and Murcia and Grenada each one-fifth. The cocoons are said to be excellent, but the silk, reeled by the peasantry, is irregular. In Portugal the industry has within the present century attained a considerable development, and 7,500 cwt. of cocoons are said to be yearly exported.

It has been usual to attribute to the Normans the introduction of the silkworm into Sicily. But M. Pariset shews conclusively that sericiculture must have been first established in that island by the Arabs. The very names Sakhrat-el-harîr (silk rock), and Nahr-tut (mulberry river), cited by Edrisi, prove this. Indeed had Roger introduced the silkworm, his eulogist Edrisi would hardly have omitted to notice the circumstance. Moreover Edrisi's work was finished in 1154. He writes of a province of Sicily as producing much silk. If the introduction of the silkworm only dated from the sack of Thebes and Corinth by the Normans in 1147, it would hardly have been possible to speak of Sicilian sericiculture in these terms only seven years afterwards. And this view is confirmed by the fact that an authentic specimen of the Arab silk manufactures of Palermo is now extant at Vienna in the shape of the "manteau de Nuremberg." The following extract from Gibbon must therefore be read with some reservations:—"This emigration of trade distinguishes the victory of Roger from the uniform and fruitless hostilities of any age. After the sack of Corinth, Athens and Thebes, his lieutenant embarked with a captive train of weavers and artificers of both sexes, a trophy glorious to their master and disgraceful to the Greek emperor. The king of Sicily was not insensible of the value of the present, and in the restitution of the prisoners, he excepted only the male and female manufacturers of



Thebes and Corinth, who labour, says the Byzantine historian, under a barbarous lord, like the old Eretrians in the service of Darius. A stately edifice in the palace of Palérmo was erected for the use of this industrious colony, and the art was propagated by their children and disciples to satisfy the increasing demand of the western world. The decay of the looms of Sicily may be ascribed to the troubles of the island and the competition of the Italian cities. In the year 1314, Lucca alone among her sister republics enjoyed the lucrative monopoly. A domestic revolution dispersed the manufacturers to Florence, Bologna, Venice, Milan, and even the countries beyond the Alps, and thirteen years after this event, the statutes of Modena enjoin the planting of mulberry trees and regulate the duties on raw silk."

In Italy the worm found a most congenial habitat, and the industry spread almost over the whole peninsula. For a time, too, the manufacture of silk fabrics in Europe attained the greatest success in Italy, and even in the beginning of the 17th century, the traders of the East India Company cite the silks of Naples as affording the highest standard of comparison. But with the decline of the great Italian republics, the silk-weaving industry passed into France and the Netherlands. Still Italy has remained one of the great sericulturist countries of Europe, and the annual value of cocoons is estimated by the *British Trade Journal* at upwards of 11 millions sterling.

From Milan the worm was introduced by Francis I. into the Rhone valley. Henry IV. was much interested in the encouragement of the industry, and patents of nobility were conferred on those who persevered in the pursuit for 12 years. George Lord Carew in his 'Relation of the State of France under Henry IV.' addressed to King James I. writes "He (Henry IV.) hath caused most of the gentlemen and pensioners of his realm to plant mulberry trees in their grounds for the nourishment of silkworms, and told me he hoped to make his realm the staple for all the silk that should be worn in all these northern parts of Europe, both in his own country and likewise in your Majesty's dominions, the Low Countries, Denmark and other regions adjacent to the Baltic sea. But some Italians of good judgment with whom I have conferred touching this point, have told me that in the end all this will come to nothing, for that silkworms here cannot prosper, the country being too cold for them, so that, if they die not, the shell which they shall produce will never be good." Lord George's Italian friends' prediction has not been verified by facts, for the silkworm has occupied the whole valley of the Rhone, spread northwards and westwards, and in 1853 France produced about 5 million pounds of raw silk.

This is the last great stride in the progress of the silkworm as

the object of an industry on any great scale. Attempts have, however, not been wanting to extend the spread of sericulture, and the epizootic which has of late years proved so disastrous to the broods of France and Italy, has given a fresh stimulus to such efforts. But on the success of these more modern experiments it would be premature to pronounce. The craze for silk fabrics which prevailed in the 16th and 17th centuries is well known. Hence the prominence of the silk trade in the annals of the E. I. Company. In 1617 George Lord Carew writes to Sir Thomas Roe, "There is such a madness in England to be clothed in silk, that we cannot endure our home-made cloth." It was this "madness" that prompted the efforts of James I. to naturalise the worms both in England and in the plantations of Virginia, and so provide, within his own dominions, material for the industry of the Flemish weavers, whom the sack of Antwerp had driven over to England. Similarly nearly a century later, the revocation of the edict of Nantes, and the impetus thus given to the silk-weaving industry in England by the immigration and settlement at Spitalfields of the French Protestant artisans, led to the attempt of the *Sieur de la Forêt* in 1699 and the Chelsea Park Company of 1718. In a sericulturist point of view these experiments were unsuccessful, but we owe to them some fine old mulberry trees. Nor have the subsequent attempts had any appreciable commercial results. The Company started nearly 50 years ago to grow silk in the county of Cork seems to have been rather a piece of "financing" than an honest speculation. At least "Father Prout" compares it to the "lottery humbug got up by Bish and O'Connell," of the *mala fides* of which he speaks in the plainest terms. The dilettante experiments of more recent date only prove that the worm with care can be raised in the English climate, and will spin a cocoon more or less valuable, a fact known to most schoolboys and hardly requiring further proof. Indeed, still more inclement countries have seen the insect successfully reared, and an attempt was made to establish sericulture in Sweden as a permanent industry. In Bavaria, Hungary and Turkey in Europe the worm has in fact attained a footing, and these countries yield, or have recently yielded, a certain amount of marketable raw silk. Algeria as an offshoot of the French industry, and St. Helena, Jamaica, Mauritius, Tasmania, the Australian settlements, New Zealand and South Africa among our own colonies, have each been the scene of various attempts, more or less successful, to naturalise the silkworm as the producer of a commercial staple. But none of them have as yet been on a scale sufficient materially to affect the total silk-supply of the world. Egypt, Madagascar and some of the islands of the Pacific have also been tried, and in California a promising experiment is in progress, the insect there completing its circuit of the globe,

and the worms imported direct from Japan meeting their cousins distant by innumerable descents, from the broods of France and Italy.\*

\* It is curious to contrast the painful progress of silk through 40 centuries with the triumphant and almost magically rapid career of "divine, rare, superexcellent tobacco." The history of the names of the two substances are also in marked contrast. The soul-subduing herb of the west carries its native name everywhere. The etymology of the various names for silk is by no means so simple. The filament or fabric did not carry its own native name with it, but each nation applied some descriptive word of its own. Thus in Burmese we have "po"; in Malay and Javanese "sutra" (Sanskrit imported bodily it would seem and meaning at first "thread" generally and so silk thread *par excellence*.) The true Indian name seems to be "pât" which holds its ground in Assam and appears in the Tamil "pattu." Here again may be traced the limitations to one specific material of a word originally of more general application. Persian supplies "abresham" and "resham," the latter now the ordinary term for silk in India. The Arabs christened silk "hair" (a

word connected with harra, which Freytag renders "nobili stirpe natus et ingenuus fuit," the etymology being base on the pre-eminence of silk among textile materials). Arabic also adopted "abresham" from the Persian and transformed, so Freytag seems to say, the Persian kash into kazz. The Greek *σπικόν* and Latin "sericum" have been already noticed, and to these are attributed Anglo-Saxon "seolc" (whence later "silk") and the kindred words found in the Scandinavian languages. German and the Romance languages (Germ. "seide," Italian "seta," Spanish "seda," French "soie") have gone to some other source. Brachet puts down "soie" to latin "seta" bearing the meaning of *silk*. Facciolati gives no such meaning nor is the word to be found in the numerous quotations from the later Latin given in the notes of M. Pariset. Calcutta does not apparently boast a copy of Ducauge, which would probably solve our doubts. The Greek *μίτταξα* appears first, according to Pariset in the 4th century A.D.

### ART. III.—THE REVIVAL OF ISLAM.

OF late years, public attention has been often directed to many events as indications of a Revival of Islām. Now, we are pointed to the Wahábís in Arabia, ruling over half the country from their capital in Nejd; then, to their widespread organisation in India, with its 'head centres' in all large Muhammadan cities, its Maulavis wandering through Bengal preaching the *jehád* as the most direct route to Paradise, its bravoës ready to assassinate any official who may appear obnoxious to the leaders, and its ceaseless efforts to arouse the Pathán border tribes to some greater enterprise than the striking down of individual káfirs.

Again, we have been pointed to the Muhammadan risings in Yemen and Kashgar, to the unyielding fanaticism of Khiva and Bokhara welded into unity and firmness under Russian domination, to Circassian and Turkoman hordes flying from Russian territory into North-Eastern Turkey, and to the restive impatience of the Turkish people under the slow, but steady, impact of Western ideas, resulting in fears of massacres of the Christian population, and in "new mosques, new schools, new teachers, all on the severer model of what may be called the nineteenth century Muhammadan revival, the same of which Arab Wahabeeism is the exaggerated prototype, multiplying over the face of the land in excess of actual requirement. Ramadhan is observed, and prayers more strictly performed than formerly. High and low, the nation is in training."—So says Mr. Palgrave in the *Cornhill Magazine* for November 1868.

Anon we are told (*Times*, August 29th, 1873) that "year after year Islām is converting hundreds of thousand of our Indian subjects, and especially the natives of Bengal, to the faith of the *Koran*. This conversion, too, not now accomplished at the sword's point, but in the peaceful shadow of British rule, works a marvellous change in the very inmost nature of the converted. It is said that the converts to Muhammadanism who are enlisted from among the unwarlike population of Bengal assume, with this new faith, a hardihood of character which would make them dangerous enemies and priceless allies."

For our own part, we cannot attach the importance that some do to any, or all, of these statements. They may receive an altogether different interpretation; their cause is not revival from within, but pressure from without. The crescent is waning, not waxing. Nearer the horizon, the fog makes it loom large to the eye; but even while we look, it is sinking from view—for ever. Province after province is year by year torn from Islām; the ideas of modern, i.e., Christian

civilisation impinge upon its surface with ever-increasing weight and intensity; and, with the mighty arms of Britain encircling it on the south, and the ever advancing stride of the Russian colossus from the north, is it any wonder that a shiver of deep foreboding thrills from time to time through every conscious fibre of Islām as the long debate between the Cross and the Crescent draws toward its close?

But to call this a *Revival* of Islam, is as utter a misnomer as it would have been to call the American rebellion a revival of slaveholding. The Southern leaders foresaw the approaching doom of slavery; and rightly judged that if a struggle *must* take place with the ever-increasing power and wealth of the North in defence of "the peculiar institution," it had better be in 1861 than in 1871, when the odds against them would be still heavier. They rose, failed, and fell, with the cause they defended so bravely and—uselessly. So, too, it is with Islām. Its approaching doom may intensify the prejudices of its ignorant supporters, until they rise in frantic defence of what they deem dearer than life, only to be trampled out of existence by the overwhelming legions that defend modern civilisation. We may pity their misguided zeal, and deplore their fate; but as Christians, our sympathies are due to the broader interests of humanity involved in the struggle.

Still, any *general* outburst of fanaticism among the 130 millions of Islām is very improbable; it possesses no cohesive force, no central authority sufficiently strong to compel obedience and weld the mass into an instrument fitted to the conditions of modern war. Sunni, Shīah, Ahmadi and Wahābi hate each other as heartily as Spaniard and Dutchman in 1573, or Catholic and Orangeman in 1873. Mere numbers, however fanatic and brave, are worse than useless when hurled, half armed and undisciplined, against modern military formations, armed only with the old muzzle-loader; how much more so against modern tactics, rifled cannon, the breech-loader and the mitrailleuse. Unaided by these modern appliances, a successful *jehād* is impossible, while their effective acquisition by Islām is equally so—for this implies accumulated wealth, the product of organised, successful industry and economy, two qualities foreign to the Muhammadan character of the present day, as all acquainted therewith well know.

Egypt, with her vast resources, has run into debt in a time of profound peace, at the rate of £6,000,000 a year for the past ten years; while her last throw for a loan of £32,000,000, shows the recklessness of the bankrupt spendthrift, doubtful of the further gullibility of the money-lenders. Turkey comprises within its limits the ancient Mesopotamia, Syria, Asia Minor, Thrace and Macedonia, once teeming with population, threaded with solidly-built roads, dotted thickly with cities and

harbours, and supporting with ease the wars of Alexander, of his successors, of the Lower Empire, and of the khalifs of Baghdad. Now, barely £4,000,000 a year is squeezed out of it, not a decent road exists in the country, save what has been made by the hated Franks with borrowed capital; three-fourths of the land is in the hands of the priests, and hence, exempt from taxation; the remainder, when held by Muhammadans, pays a tenth of the produce as land-tax, when held by Christians, five-tenths, in addition to the tax for exemption from the army. The Turks do not, and the Christians dare not, invest capital in cultivation; hence, says Sir H. Rawlinson, "In the hands of the Turks the country never will improve, for the faith of Islām is incompatible with civilisation." And hence its financial career, even amid profound peace, consists principally of the operation known as "flying kites"—paying former loans by raising new ones as long as its fast waning credit will permit. The ruler of Persia, too, has just put all the resources of his country in the hands of a Russianised Jew, to be manipulated by English engineers and European capital into some semblance of modern civilisation. But, were he already a feudatory of Russia, he could hardly carry out her designs more ably, nor better secure the impossibility of Persia joining in a *jehād*, than by the direction given to the first Persian railway—from the Caspian to Teheran. For either or all of the leading Muhammadan powers, therefore, to proclaim *jehād* would be simply financial and political suicide. Of Central Asia it is sufficient to say that in ten years a Russian force, never more than 16,000 strong, has so completely subjugated it as to fully justify Vambéry's eloquent remarks on the progress of the Russian arms:—

"Towns and countries hitherto unknown to the denizens of the Western world have been thrown open, and places where the European traveller could only venture in disguise, and at the peril of his life, are now not only free and safe, but actually governed by Christians. Churches and clubs have been opened at Tashkund, Khojind and Sumarkand; and the monotony of the muezzin's chant is broken by the cheerful sounds of the bells of the Greek churches, more terrible to Muhammadan ears than the roar of artillery. . . . . The Russian successes in Central Asia have dealt Islamism the severest blow it has ever received from Christendom in the course of their thousand years of struggle. In modern days, the powerful influence of Christian Europe had permeated all parts of Muhammadan Western Asia, the holy places Mecca and Medina themselves had not escaped the innovating spirit of the times, but the Muhammadanism of Central Asia retained its primitive character pure and undiluted, the faith flourished unopposed and uncontroverted, Bokhara, not Mecca, had become practically the spiritual centre of Islam. Thither came the

ascetic, the pious member of a fraternity, and the enthusiastic theologian ; and though not generally known, it is an undoubted fact, that zealous Moslems in all parts of the Ottoman Empire, in Egypt, Fez, and Morocco, received thence the inspirations of their religious enthusiasm. The sight of this holy ground profaned by the presence of unbelievers, and ruled by them, must be intolerable to all pious souls of the Islamite world, and the dust raised by the fall of this chief pillar of Islam, as Bokhara has always been called, will long hang as a dark cloud, overshadowing for many a day, if not for ever, the horizon of the future prospects of Islam."

In Central Asia, then, the *jehád* has been tried and failed. Kashgar must fall, sooner or later, and the outburst of Muhammadan fanaticism in Western China is utterly crushed already. And if Vambéry's idea of the effect on Islám of the fall of Bokhara be correct, what will be the effect of the long-delayed, yet inevitable, fall of Constantinople, and the political extinction of Islám ? For, since all this political and financial debility results from the operation of a constant cause—the political and religious character of Islám—it must go on at an increasing rate, ensuring the ultimate and speedy political extinction of Islám, wherever it comes in contact with modern civilisation.

Returning to India in our survey, we find here a larger Muhammadan population than in any other country ; indeed, Bengal alone contains more Muhammadans than there are in Turkey itself. Their distribution, too, as shown by the recent census, contradicts all our previous notions thereof. In the North-West Provinces, the seat of Government of the Great Mughul, ever reckoned the stronghold of their power and influence, they number only 14 per cent. of the population. Patna and Behár, usually thought to be strongly Muhammadan, only contain 12 per cent. ; in Bengal Proper, they number about half the population, while in East Bengal, the great basin drained by the lower waters of the Brahmaputra, they form from 70 to 80 per cent. of the population, and in some districts nearly the whole.—(*Bengal Administration Report, 1871-72, pp. 33*).

Even now, just as frequent accessions to Hinduism occur from among the aboriginal tribes, similar accessions occur to Islám from among the low caste Hindús, and from the same cause—the greater consideration enjoyed by a Hindu as compared with an outcaste, or by one of the vast Muhammadan community as compared with the despised Dom, Chandal, and other semi-Hindu communities. We have known several instances of this in West Bengal ; but have never yet heard, either East or West, of a high caste Hindu accepting Islám from religious convictions. Some advantage more appreciable by the Hindu mind, as for instance, a desirable marriage connection, especially in the case of Hindu

widows, was invariably the motive for the change of name—we can hardly say, of faith.

But when we read in the *Times* that “year after year, hundreds of thousands, especially of the natives of Bengal, are being converted to the faith of the *Koran*,” we, who have been long resident in Bengal, and specially conversant with the religious propagandism therein, are lost in astonishment at our ignorance or—at that of the *Times*. And our astonishment is by no means lessened when we notice that such small matters as the locality, time, witnesses, &c., of this vast propagandism are left to be added *à discrétion* to suit the reader's taste and ability to digest wholesale assertions.

In the first place, it is assumed that a census, accurate at least within scores or hundreds of thousands, has been taken yearly or decennially, so as to obtain the relative proportion of Muhammadans and Hindus at each succeeding period. But when and by whom, was this census taken? Evidently it must have been taken by some “special correspondent” of the *Times*, with a skill surpassing even the enterprise of the *Telegraph* or the *New York Herald* in the supply of news; for neither the people nor the Government of Bengal know any thing of its performance. The *Bengal Administration Report*, 1871-72, p. 26, says:—

“As an illustration of the extreme point to which the want of statistical knowledge of the people had reached in these provinces, the following figures are given showing the difference between the population of some important districts as given in grave statistical returns by the authority of Government within the last few years, and stated in the Administration Report, published in 1870 according to the latest returns, and that now ascertained by census:—

	Population according to return of 1870.	Population according to present census.
Nuddea (perhaps the most cared for and most fully administered metropolitan district in Bengal)	568,712	1,812,795
Raidpore ...	147,127	1,012,589
Pubna ...	337,679	1,211,594
Cuttack .. ...	215,835	1,449,784
Monghyr ...	755,389	1,842,986
Kamroop or Gowhatty ...	80,861	561,681

And, altogether, the difference between the estimated census of Bengal in 1870, and the actual census of 1871-72, amounted to nearly 20 millions! With such striking illustrations of the utter ignorance which prevailed among even the governing class on the subject of the mere numbers of the population, not to say



any thing of the relative proportions of Muhammadans and Hindus in Bengal, it looks very like Munchausenism to pretend to such accuracy on these points as to affirm a yearly accession to Islām of hundreds of thousands of Hindus in Bengal; and we are probably not far out in attributing this feat of historical accuracy to the same genius who recently announced in an article on Afghānistān in the *Times*, the discovery that Dost Muhammad was a Pindāri chief!

Again, if this vast proselytism exists anywhere, it must be in East Bengal, where the population are nearly all Muhammadans; it is there we shall find "under the peaceful shadow of British rule," the eager intellectual life, the religious vitality and antagonism implied in this vast work of converting hundreds of thousands to Islām. But the one great complaint of the Christian missionaries who traverse East Bengal is the utter absence of these qualities in Hindu and Muhammadan alike. Two years ago when these statements were just made by the *Spectator* in its review of Mr. Hunter's "Our Indian Musalmāns," one of the Baptist Missionaries in East Bengal, who has probably traversed it more extensively than any other living European, made the subject one of special enquiry by himself and his preachers for more than a year, in every village, Hindu and Muhammadan, that they visited; but, save solitary instances, few and far between, they failed to find the least trace of any movement which could give colour to such broad assertions as those used by the *Times* and *Spectator*. Indeed, the mass of the population of East Bengal, Hindu and Muhammadan alike, are so steeped in ignorance, that those repeats their *mantra* and these their *namaz* without understanding a word of it; and the reason usually given for their particular faith is ever the same "Our fathers were Hindus (or Muhammadans), hence we must be."

Such, too, is the testimony of the officials, whose opinions, on enquiry, coincide with the statements of the *Friend of India*, (September 4th, 1873), in reviewing the official Report on Maimansingh. "With the people of Mymensingh ignorance means, not superstition, but indifference to all religion save ancestral forms of worship. The toleration born of this indifference makes Hindus and Muhammadans good friends; though Sunnis, the latter keep the Mohurram as a sort of spectacle in which the Hindus join." And, *vice versa*, the greater portion of the crowd enjoying the Hindu spectacles in Dacca is generally Muhammadan; while those of the rural districts, when remonstrated with for their attendance on the idolatrous ceremonies of their neighbours, sometimes reply:—"It is the zemindar's order," or, "others do it, so we do." Taylor, in his History of Dacca (1840), gives the same character to the people at that time. "These two classes (Hindus and Muhammadans) live

in perfect peace and concord; and a majority of individuals belonging to them have even overcome their prejudices so far as to smoke from the same *kopkah*," (p. 257).

Yet another cause has operated indirectly to render impossible any such accessions to Islām in Bengal as that affirmed above, in the different attitude taken by the Hindu and Muhammadan communities toward English education. The ruins of magnificent forts, palaces and mosques, the traditions handed down in the community, the stories and allusions of their scanty current literature to the glories of the Muhammadan rule, all remind the Muhammadans of the time when Islām ruled unchallenged in the land, when the infidel trader came with cringing steps to beg a footing where now he rules triumphant and unquestioned—so confident in his own might and resources, as to appear contemptuously oblivious of the very existence of Islām, other than as one of several expiring creeds. Every effort to shake off the grasp of the Christian has only tightened it; and the empire over the body, secured at Plassey, Baxár and Seringapatam, is now supplemented by equally insidious and persistent efforts to subjugate the mind also to the sway of Christian civilisation, by schools, colleges, tracts, books, and missionaries. Naturally, therefore, the struggle between loyalty to the religious and political teachings of their ancestors, and loyalty to the Christian Government under which they enjoy such liberty and peace, fills many Muhammadan minds with perplexity, rage and despair. Hopeless of changing the current of events, they will not yield to its rush; hence it surges around and over them, burying them beneath a stratum of ignorance and oblivion; sweeping place, power and wealth from them into the hands of their Hindu neighbours who have prudently gone with the stream and through English education almost monopolized all subordinate officers under Government. Hence, when urging on respectable Muhammadans the duty of giving an English education to their sons, in order that they may have an equal chance with the Hindus in the battle of life, how often have our representatives been met with sentiments which, however courteously expressed, were tinged with defiant despair. "If they receive English education, they are sure to think themselves wiser than their fathers; they had better remain beggars in Islām, than be rich in this world, and lose all in the next." Or, as the Inspector of Schools, Eastern Circle, (*Bengal Administration Report, 1871-72, p. 254*) puts it:—"A well-to-do Muhammadan sent his son to the Government school. The boy was successful, and the father was urged to send his other son to school; the father replied that he might, under pressure, let one of his sons go to be made into an infidel, but he could not let more than one go to the bad in that sort of way."

But whatever be the religious advantages which the Muham-

madans imagine themselves to retain from this refusal of English education, it has been an undoubted social disadvantage to them in the eyes of their Hindu neighbours. For the Hindu pen to-day occupies the place once held by the Muhammadan sword; the Bengáli Bábu seems as indispensable to British rule, as the Pathán or Rájput *talwár* was to the Mughul rule. By English education, the child of the Dom or Chasa may rise to rule over the descendants of the Bráhmans and Patháns before whom his fathers grovelled in the dust. The Muhammadan thus takes a lower place in the social scale by his rejection of education; and such being the case, the shrewd Hindu cares not to link himself to a falling creed, which promises little to its votaries save ignorance, poverty, and hard work. Better keep the lax creed of his fathers with the hard work, in the hope that the key of education now offered to the millions, irrespective of caste or creed, but hitherto sullenly rejected by the Muhammadans, may unlock to his children the treasures of power and wealth hitherto possessed only by his oppressors. In such altered circumstances, what influence is left to the Muhammadan, strong enough to effect the conversion, year by year, of hundreds or even scores of thousands of Bengalis as alleged by those would-be-wise alarmists of the *Times* and *Spectator*? They have been simply trading on the inaccuracies of previous guesses at the number of the population, and the consequent impossibility of finding the actual proportion of Hindu and Muhammadans; they have given us surmise for certainty, and painted up fancy to supply the place of fact.

One other possible explanation of the above errors may be found in the rapid conversion of Sunnis and Shjāhs into Ferázis or Wahábís, which has taken place during the past 20 or 30 years, and has possibly been distorted by some writers into conversions of hundreds of thousands of Hindus to Islám! For in the present downward tendency of Indian Islám, it is not at all surprising that many Muhammadans should accept the teachings of Abdul Waháb, which may be simply summarised as an attempt to restore Muhammadanism to the exact form it possessed during the life-time of its founder; discarding as idolatrous all modern exaltations of Muhammad or any other prophet, Inám or saint, and all forms, ceremonies and observances, originated since the times of the prophet; and finally, insisting on the duty of spreading Islám by the sword the chief duty of the faithful, and the most direct way to paradise. The logic is concise and forcible to the devout Muhammadan, if not reasonable to us. By the sword Islám had been established, by the sword it must be re-established. God has placed the sword in the hands of Islám to re-assert the half-forgotten truth of His existence, to protest against the idolatry of the heathen and the fetishism into which the neighbouring nominally Christian com-

munity had fallen. But Islám had proved recreant to its mission, had fallen into the very superstition it was sent to destroy, and it had become a lifeless and corrupt formula, under the frown of the Almighty whom it had forgotten. To regain its original life, it must resume its original work, in the original way; "wherefore fight against the unbelievers, and be severe unto them; for their dwelling shall be hell."

These notions, introduced into East Bengal by Shariyátullah, the father of the notorious Dudu Miah, on his return from Arabia in 1828, and afterwards preached everywhere by the emissaries of Sayyid Ahmad who set up as the long expected Imám Mehdi, spread with great rapidity in East Bengal; and the sect now numbers as its adherents, so they boast, the majority of the Muhammadan population. And the process is still going on; indeed, a few months ago, we came into personal contact with a little episode thereof. Abdul Gafur, a Wahábi Maulavi, was joined by nearly all the inhabitants of a large Muhammadan village near Dacca, only 15 families holding back from the movement. The new creed was naturally tried on the recusants first, in the shape of violent abuse and ill usage. They appealed to the Hindu zamíndár for protection; and many of the new converts, not liking the turn things were taking, rejoined the recusants. A row ensued, the zamíndár fined some of the converts, forbade their putting up a separatist masjid, or receiving the obnoxious Maulavi into their houses under a penalty of Rs. 25. The Wahábís appealed to the nearest court; beaten there, they applied to the *hakims* in the city courts. Five or six cross-suits came off in quick succession; but though they gained their case in court under the lead of the indefatigable Abdul, the zamíndár's means of retaliation made them feel that victory was almost worse than defeat, until they seriously contemplated "pulling up stakes" and going elsewhere. "But," said Abdul and his people, "where are we to find so much unoccupied land? The Hindu zamíndárs are all leagued against us, and the Muhammadan zamíndárs do not care to help us; what are we to do?"

For my own part, I cannot quite sympathise with the outcry often raised against Indian Wáhabism, but rather welcome its spread. It forces the apathetic Muhammadan community to think and inquire into the basis of its faith. It cuts away, at a blow, the whole fabric of Muhammadan tradition and superstitious observance; and thus narrows the issues respecting Muhammad to what he says about himself in the *Korán*, instead of what his followers say about him contrary thereto. It appeals to the sword as the sole arbiter between Islám and modern civilisation; an appeal that can have only one issue, as the slightest acquaintance with the vast military resources of Christendom, and the utter weakness of those of Islám,

'will overwhelmingly prove to all, save a few insane fanatics.' But to the Indian Government it presents a very grave aspect; for it may mean the uprising of vast masses of men, perhaps at no very distant date, armed with the firearms so carelessly allowed to pour *ad libitum* by way of Calcutta and Dacca, into the hands of the peasantry of East Bengal, until almost every peasant has a gun, that cares to buy one. It may mean the assassination of the officials, far and near, the massacre of hundreds of Hindus and Europeans, the sack and burning of countless villages; and it will then certainly mean the retaliating slaughter of thousands of ignorant Muhammadans, and the stamping out, under the heel of a vindictive war, of Wahábism, the latest phase of Islám, as incompatible with modern civilisation, law, and order.

It is the acknowledged duty of the Indian Government to use every means to avert these possible eventualities; and hence it is well that the Government has decided "to give to the Muhammadans their full share of high class intellectual training, and of sound knowledge useful to them in life, combined, but not clashing with, that sound knowledge of Oriental tradition which belongs to their race and country." The difficulty lies in "framing for Muhammadans a course of secular instruction, which is the only kind that can be given in Government institutions, upon the study of a literature which on so many sides is intimately connected with their religion and doctrinal tenets."—*Resolution of Governor-General in Council*, June 1873.

It may be thought presumptuous on our part, but we cannot help suggesting that the framers of the desired course might find valuable help therein by examining the text books used in the American and French colleges and schools long established in Turkey and elsewhere within the borders of Islám, since the same difficulty in yet greater degree must have beset their efforts to lay down a course of study which should impart sound useful knowledge based upon modern science, and yet not arouse opposition from the people they sought to benefit.

Should such a scheme be carried out, and a sound knowledge of men and things as they *are*, not as they *ought to be* according to the Arab and Persian poets, be imparted to the respectable Muhammadan youth of the country, we might expect great things from it. The utter futility of all efforts to roll the nineteenth century back to the seventh, to resuscitate Islám in the face of the overwhelming and ever increasing powers of modern civilisation, would be gradually impressed on the next, if not the present, generation of Muhammadans; thus completely neutralising all Wahábí attempts to mislead them into hopeless rebellion. But if the course of study be mainly chosen from the literature and philosophy of Muhammadan writers, to secure which strenuous

efforts will doubtless be made, the evil will be only intensified; the conceit, the ignorance, and the isolation of the Muhammadans will become practically insuperable here, as in Turkey.

With all deference to the plans of the Government, we would suggest that it is not from the better class of Muhammadans who can afford to receive and profit by "their full share of high class intellectual training," that we have most to fear; but from the utterly ignorant and neglected Muhammadan masses, who imagine that they have little to lose and much to gain by overturning the present state of things—people so ignorant as to believe that the Sultán of Turkey is still king of kings, receiving tribute from all other nations; and that by his authority the Queen rules over India; so ignorant as to suppose that since their own neighbourhood is largely Muhammadan, while a Christian is hardly ever seen, the same state of things exists every where; and, reversing the real state of things, believe that Christendom itself only exists by the sufferance and supineness of Islám, and that the whole accursed *Feringhee* race (may their fathers' graves be defiled) might be swept from existence by one real effort of the might of Islám. Hence the disrespect, and sometimes insult, shown to Christians when wandering at times in out-of-the-way Muhammadan neighbourhoods. Now, were the Government to cover the districts largely inhabited by Muhammadans, as thickly as possible with vernacular schools, providing them with good maps and geographies, also with brief abstracts of history, Indian and European, as vernacular reading books, in addition to the usual primary course of writing, arithmetic, &c., were this course carefully taught by competent teachers, properly supervised, and checked by examinations upon which small scholarships for the higher schools should be made dependent, the Wahábí exhortation to rise and fight for Islám would frequently meet with the counter exhortation—"Go to school, you know not what you are saying."

This effort to remove the incubus of ignorance from the Indian Muhammadans, and the vast impending changes within and without Islám, possess peculiar significance for Christian missionaries. Unable generally to read their own vernacular, much less Arabic, the Indian Muhammadans are as ignorant of the *Korán* as the Sudras are of the Vedas; and this universal ignorance is a frequent excuse for avoiding all discussion of the issues between Christianity and the *Korán*. And when a Maulavi stands up as the champion of his ignorant co-religionists, as soon as he finds himself at all "cornered," somebody among his followers suggests, in all sincerity of course, "it is time for *namaz*"—whether it be one o'clock or six, it matters not; or, a row is carefully got up, under cover of which he discreetly retreats or the missionary is driven off, and the report is then industriously spread that the padre was completely used up.

Now, were the people educated, with the vernacular *Koían* in their hands, so that they could see the truth for themselves, such subterfuges would be impossible, the truth would be made manifest, Christ would be honoured, and his opponents silenced. For although, in some of its main features, Islám is directly opposed to the Gospel, yet its many points of agreement with evangelical Christianity form a common ground and authority for discussing the grave questions at issue between the rival creeds. And when we enter a Muhammadan village, and stand before its white Masjid, perhaps some grand old structure of ancient days, as we think that it stands, and has stood, perhaps, for ages, in silent protest against the polytheism around, summoning all to the worship of the One Invisible God, and are, perhaps, at once welcomed by the gathering people as *Kitábi-lok*, one cannot help feeling a sense of brotherhood which is utterly impossible to be realised in a Hindu village amid its proud Bráhmaus, monstrous idols, and filthy phallic emblems.

But to return. While Muhammad affirms himself and his message to be sent specially to the inhabitants of Mecca "and the Arabs who dwell round it," yet he repeatedly asserts the divine origin of "the gospel, containing direction and light, confirming also the law which was given before it, and a direction and admonition to those who fear God; that they who have received the Gospel might judge according to what God hath revealed therein; and whoso judgeth not according to what God hath revealed, they are transgressors. We have also sent down unto thee the *Korán* confirming the scripture which was revealed before it, and preserving the same from corruption."—Sale's *Koran*, p. 82.

This oft-repeated affirmation of the close agreement of the *Korán* with the Hebrew and especially the Christian scriptures, susceptible as it is of clear and definite proof or disproof, affords, we think, firm ground for discussing the claims of Muhammad and the *Korán* to be inspired. Again, while the utter silence of the *Korán* respecting the doctrines of atonement and mediation, supplies ample disproof of its boasted accord with the law and the gospel—yet its denunciations of Mariolatry and image-worship, of the priest, martyr, rag, bone, and other fetish worship, which many Christian communities in the fifth century, and on through the dark ages, substituted for the direct appeal to the vernacular scriptures, and to the spirit of God as the ever living Teacher in the church, are hearty enough to find favour with the strictest Puritan in later times.

While, therefore, in discussion with Muhammadans we should at times apply the test implied in the challenge: "If it had been from any besides God, they would certainly have found therein many contradictions," (Sale's *Korán*, p. 65) we should aim rather to

take the *Korán* with us as far as we can, and then shew that it does not go far enough to meet the wants, the capacities, and the history of man.

The faith in the sovereignty of God and His irresistible will which made the Muhammadan arms invincible in many a perilous struggle, was all powerful to destroy, but powerless to uplift, without the aid of other ideas as adjuncts thereto. For it presents Him rather as an unsympathising engineer, an inexorable ruler, a destroyer of the weak and vile, rather than as one who pities us in our conflicts with temptation and sin, and designs to raise mankind gradually out of its misery and degradation. But herein is the glory of the Gospel—that it displays God as “not willing the death of the sinner;” instead, “the Son of Man came to seek and save that which was lost.”

Again, this unqualified belief in the absolute will of God necessarily produces amid inaction, not patience, but that apathetic belief in fate which we see in the Muhammadans around us—fate against which there is no struggling, making men victims of indifference, languor, and despair, individual and national. But the “patient endurance” inculcated in the gospel, “worketh experience” of God’s love, and experience hope, and hope life-giving energy, individual, and national.

So, too, pain, affliction, suffering, is proclaimed in the *Korán* as punishment on the erring and wicked; whereas the Gospel whispers hopefully, “Whom the Lord loveth He chasteneth, and scourgeth every son whom he receiveth.” It says that suffering, trial, is but a blessed means of growth, development, strength; and that even “the Captain of our salvation” was “made perfect through sufferings.” The Gospel thus reconciles the justice and goodness of God with the existence of suffering in the world—the *Korán* leaves the unsolved difficulty a huge blot on the character of the All-perfect and All-merciful One.

In order, therefore, to utilise the many points of contact between Islám and the gospel, as well as in view of the new scheme of Muhammadan education, it is absolutely essential that the vernacular *Korán* should be in the hands of the Muhammadan population; so that, like the Jews of Berea, they should be able to “receive the word with all readiness of mind, and search the scriptures daily, whether these things are so.” And for this purpose, since it is impossible for us to force the Maulavis to issue an authorised translation,—at least, none can be had or heard of in East Bengal,—we would strongly recommend the re-issue of the Hindustáni translation published at the Presbyterian Press, Allahabad, 1844, revised and annotated suitably to the present juncture of events.

Next, just as in armies men are specially trained for the



cavalry, infantry, artillery and engineer services, so in our Indian Mission army, we should have men specially trained in the Arabic and Persian languages and literature, as well as in the vernacular of the district in which they are to operate, in order to act effectively on Islām,—men like Dr. Pfander, who would be regarded as Maulavis, and treated with corresponding respect by the Muhammadans themselves. And much of this preparation might be done at home, were the facilities offered by our English Universities, Oxford and London, for the study of Arabic, Muhammadan law, &c., thrown open to intending missionary students, free of charge, and irrespective of denominational status. Or, if no special facilities now exist in sufficiently concentrated form to carry out such a scheme, they might be easily provided, either by funds raised for the purpose, or by grants from the various mission societies labouring within the regions of Islām. Years of special study are thought needful for the administration of justice, and the service of the State—how much more needful then for the tremendous work of changing the basis of a nation's faith, of overcoming the prejudice engendered by ages of supercilious ignorance, of moving the secret springs of human action, and, with God's help, bringing the mind to empty itself and sit humbly down at the feet of Jesus, to be taught and filled by Him.

In the fast approaching time when, having vainly attempted to prevent the last Dar-ul-Islām from becoming Dar-ul-Harb, the Muhammadans, broken, dispirited, despairing, shall turn humbly and earnestly to consider the truths involved in the stern logic of events, if we can but have ready such a body of men, European and native, specially trained, and fired with apostolic zeal, they will with power and success point Islām to Jesus as the Prophet, Redeemer and King of all. "Then shall they look on Him whom they have pierced, and mourn." The Cross uprising in place of the Crescent will thrill the nations with awe; and out of the ferment a Christ-regenerated Islām may arise to proclaim the power and love of "God manifest in the flesh" with holy energy and fiery zeal, emulating in its rapid victories over the populations of Asia and Africa, the whirlwind progress of the Muhammadan arms in the seventh and eighth centuries. "If the casting and way of them (Islām) be the reconciling of the world, what shall the receiving of them be but life from the dead?"

ISAAC ALLEN, M.A.

## ART. IV.—RIFLED ARTILLERY.

*A paper for the general reader.*

### PART II.

**I**N an article in our last number we endeavoured to give the general reader some elementary ideas on the subject at the head of this paper. In the hope that he may not have been "crammed with distressful bread," we will now endeavour to lay before him some further lucubrations calculated to enlarge his knowledge of the subject.\*

Probably the first rifled gun that was ever used in action was a breech-loader, the invention of Major Cavalli of the Sardinian Artillery; it formed part of the armament of the batteries of the besieger at Gaeta in 1848. It was a cast-iron two-grooved gun, firing a ribbed projectile. It was, however, not successful as many of the guns burst: the system was speedily abandoned.

Two years further back, Baron Währendorf, a Swede, was the first to bring forward a lead-coated projectile. A breech-loading gun of his invention was tried in various countries, including England, but the invention never attained the dignity of the crucial trial of being fired in action.

In the Crimean war of 1854-5, Mr. Lancaster's cast-iron oval-bore gun was tried but with very partial success. The gun, being of so fragile a metal, his system was tried under very unfavourable conditions: and as it is quite possible that this system may yet be brought into use, it will be here succinctly described.

The oval-bore with a twist was far from being the invention of Mr. Lancaster, for it is very clearly described in an article in Latin in the *Commentarii Academiae Scientiarum Imperialis Petropolitane Tomus IV. ad Annum 1729*, by *Joh. Georg. Leutmann*, published in 1735; and as, perhaps, some of our readers may be curious to know how such subjects can be treated in Latin, we will quote the first paragraph alluding to the oval-bore.

"§28. Tandem singulare problema explicabo. Scilicet: conficere Sclopetum\* cochleatis sulcis non prædeditum, quod tamen globulum gyRANDO circa suum axem proficit, ac si cochleatum esset cum tamen perspicendo per tubum nul-

\* Gun: stlopetum (scl.) used in modern Latin for a gun, and like bombardarda ("musket"), intended to express the sound of explosion (stloppus s.

scloppus,=a slap, the sound produced by striking upon the inflated cheek) Pers 5, 13. Smith's Latin Dictionaries.

lo modo cognosci paterit, unde gyralem directionem concipiat globulus. Tale sclopetum omnia præstat quæ a cochleato tubo expectari possunt."\*

The author goes on to describe and to figure an expanding file made in longitudinal halves, to be attached to the end of the rifling bar; to this bar is given the usual rifling twist and thus by gradually expanding the two halves of the file by means of what are technically called "set-screws," a barrel originally a circle in cross section is given one forming an oval having the ordinary rifling twist.

In Mr. Lancaster's 32-pounder the major axis measured 6·97 inches and the minor 6·37 inches, so that considered as a two-grooved rifle the grooves were 0·3 inch deep at their centres. The pitch of the rifling was one turn in  $56\frac{1}{2}$  calibres of the minor axis. One of the great mistakes made was that the twist was increasing instead of uniform. Another mistake was that the wrought-iron projectiles were simply oval but without any rifle-twist upon them. Under such circumstances it can hardly be wondered at that the gun was most irregular in range and that the projectile being subject to jam in firing, the guns occasionally burst.

The French Artillery in 1850, under the orders of the President of the Republic, commenced experimenting seriously with rifled artillery: the experiments were carried on with frequent interruption owing to political events until May 1857, when France adopted rifled field guns as the armament of its artillery. The 4-pounder field gun—"La mère des canons de campagne" as the French Artillerymen call it—has a bore of 3·4 inches in diameter and 18 calibres in length; it has six centering grooves, making one turn in 24·7 calibres and weighs  $6\frac{1}{2}$  cwt. The projectiles have 12 zinc studs in two rings to fit the grooves. The gun projects a common shell weighing 8·9 lbs, and a shrapnel of  $9\frac{1}{4}$  lbs. The gun thus weighs  $72\frac{1}{2}$  projectiles. The charge of the gun is 1·2 lbs; the relative charge or ratio of weight of powder to common shell is 1 to 7·4. The initial velocity is 1066 feet per second. The gun is of bronze. This rifled field gun was the first to appear in battle and made its *début* at Solferino in 1859. Of its performance the French official report of that battle says:—

"In the midst of the incidents of this combat of twelve hours duration, the cavalry was of powerful assistance in checking the efforts of the enemy on the side of Casanova. On several occasions Partouneaux's and Desvaux's division charged the Austrian infantry and broke its squares. But it was our new artillery which

\* Finally I will explain a singular problem. To wit, to make a gun not provided with helical grooves which nevertheless projects its ball twisting round its axis, as though it had been rifled, although for all that

by looking down the barrel it shall in no wise be open to discovery, whence the ball derives its direction of revolution, such a gun excels in all things which can be expected from a rifled barrel.

produced the most terrible effects on the Austrians. Its balls went to distances which their guns of the largest calibre could not respond to, and strewed the plain with their dead."

An eye-witness of the battle writing to the *Times* on the 25th June 1859, says :—

"It was in this flight that the immense superiority of the new French rifled cannon shewed itself. The lightness of the pieces is such that they could be brought up hills so steep that even infantry had no small difficulty in scaling them. Still the range of them and their precision are almost incredible. You could see their shells bursting among the guns and infantry of the enemy, while the shells fired from his guns at the highest elevation were falling short or bursting in the air."

Again the *Times*, on the 5th August 1859, publishes the following remarks on this battle :—

"When the batteries of the 9th Corps (Austrian) opened fire on the plain of Medole they were so quickly mauled by the superior number of the French guns that it was found necessary to withdraw them. In order to do this with effect, Mensdorf's cavalry was ordered out into the plain, and the hostile fire was then divided with so much success, that the batteries were limbered up with smaller loss than might have been expected. But military men very properly enquire whether heavy Dragoons were not organized for a different purpose than that of drawing off an enemy's fire from artillery. The veriest tyro understands how troops may be moved under cover of artillery, but what shall we say of artillery moved out of fire under cover of cavalry. Had Count Mensdorf been near the enemy, there would have been some sense in ordering him out into the plain ; but it was really too bad to send him into a plain covered by hostile balls fired from a distance of 3,000 yards and out of range of any guns such as cavalry divisions generally take with them. One can fancy the rage of the officer in command of the battery that first accompanied Mensdorf when, in five minutes after he entered the plain of Medole, five of his guns were dismounted at a distance which rendered any attempt on his part to fire perfectly useless. A second battery took the place of the first one. In less than a minute three of his guns were dismounted.

\* \* \* \* \*

"I was here that the superiority of the rifled cannon over ordinary artillery was finally and decisively proved. The horizontal fire on the plains of Medole dismounted guns more than 3,000 yards off. At Solferino the practice was by no means so successful, and the French, firing from heights against heights, did not aim well. The rifled guns may be said, however, to have rendered invaluable service."

The reader will not fail to remark, when he compares the performance of this gun in 1859 with that in 1870, what a great difference it makes in the accuracy of practice, whether the gunner's aim is undisturbed by the bursting of an enemy's projectiles about his ears, or otherwise. Further the peculiarly suitable nature of the plain for good practice, the size of the object aimed at, the number of guns firing, as well as the safety of the gunners go far to account for the effect of the guns in 1859.

The echoes of these guns rang in the ears of artillerymen and soldiers in all parts of the world. The principle of *Omne ignotum pro magnifico* intensified the effect of the new rifled guns. Gunners and mechanists in all parts of the world turned their attention to the subject.

Mr. W. G (afterwards Sir William) Armstrong had been making experiments with rifled guns as far back as the date of the Crimean war of 1854-5. His system was first brought to the notice of the Duke of Newcastle (then Secretary of War) in December 1854, when six guns were ordered for trial. In July 1855 the first gun was delivered, a 3-pounder. In December 1856 it was bored up to a 5-pounder, and at the end of that month was officially reported on as having made remarkably good practice at 1,500 yards. In January 1857 a gun was ordered to correspond with the 9-pounder bronze smooth-bore field gun. This gun, an 18-pounder was reported ready on the 1st July 1857, but no trial took place till the 25th January 1858, when it was pitted against the 32-pounder S.B. gun. Lord Panmure the then Secretary of State spoke of it in these terms: "For all purposes of projection and accuracy of flight of the projectiles the experiments are conclusive." On the 24th September 1858, one 32-pounder of twenty six cwt., one 12-pounder of eight cwt., and one 6-pounder of three cwt. on this system were ordered for trial by a Special Committee. It reported on the 16th November 1858 that they recommended the "immediate introduction of guns rifled on Mr. Armstrong's principle, for special service in the field."

Mr. Armstrong having taken out a patent for his invention in ordnance, unreservedly assigned it by a deed of gift to the Government on the 15th January 1859. General Peel, the Secretary of War, in a debate in the House of Commons, expressed himself thus as to the new rifled gun: "The great advantages of this gun were its extreme lightness, the extent of its range and its accuracy. An Armstrong gun throwing a projectile of 18lbs. weighed one-third as much as the gun now in use discharging shot of that weight, the range of a 32lbs. gun (R.) fired with a charge of 5lbs. of powder, was a little more than five miles and a quarter (hear, hear); while the precision of the gun was still more extraordinary. The accuracy of the gun at 3,000 yards was as seven to one

compared with that of the common gun at 1,000 yards ; while at 1,000 yards it would hit an object every time which was struck by the common gun only once in 57 times : therefore at equal distances the Armstrong gun was 57 times as accurate as our common artillery (hear) : its destructive effects, also exceed anything which had hitherto been witnessed."

In another part of his speech the Right Hon'ble Gentleman stated that : "The gun submitted to the Government by Mr. Armstrong was breech-loading, rifled, wrought-iron gun of peculiar manufacture, throwing a projectile which answered as either solid or hollow shot, as shell or common case."

About the accuracy of this wonderful gun the *Athenæum* published the following anecdote, which will probably suggest to the reader that there must have been something sympathetic between the author of the narrative and the victim of the gun. "A few days ago we saw the range and accuracy of the new Armstrong gun tested in a way which demands a note. Cooling ourselves on the Essex coast near the artillery practising ground, we were asked to see the firing, and while this goes slowly and solemnly on, one of them (who?) spies a flight of geese far out to sea. 'There they light on yon sand-bank,' up go a dozen glasses. Yes ; there they flicker in the sun, grey and white, mere specks in the blue sea air. Load the gun—load at the breech—poise—touch—bang ! Boat off there to the sands ! A signal tells the tale. 'The shot has struck the swarm !—a life is taken from the flight—and this at six miles seven furlongs (12,100 yards) from the mouth of the gun. A shot as well aimed from Primrose Hill should hit the ball on Greenwich Observatory, or if fired from Richmond Park should bring down a rider in Rotten Row."

In common fairness to the smooth-bore gun, we feel bound to cap the story by the *Athenæum's* penny-a-liner.

On the terrace of the Castle at Heidelberg may be seen a monument, much like a small tombstone, but not *in situ*. On its face it bears the following inscription, below which is a device representing two spheres almost in contact:

ANNO MDCLXXXI  
DEN XXII JANVARI  
VOM SCHLOSSEN AN DIESEN ORT  
HAT WIEDER ALLER HOFFEN  
AVS STÜCKEN CHVR FÜRST CARL  
MIT KUGEL KUGEL TROFFEN.

This inscription in humble English prose reads thus :

In the year 1681 on the 22nd January firing cannon from the Castle at this spot, the Elector Charles, against all hope, struck ball with ball.

It is not known whereabouts the stone was found, but as there

are fortifications on the hill on the opposite side of the Neckar, one of the two guns is supposed to have been fired thence and the other from the Castle, resulting in this unparalleled shot.

But to return to the Armstrong gun; a description of the 12-pounder field gun will give an idea of the method of construction and loading at the breech.

The gun is a tube 6 feet long open at both ends. It is formed of (1) the tube proper, of (2) a breech and (3) a trunnion piece, of (4) a coil in front of (5) one immediately in rear of the trunnions, and of (6) one over the breech. These six pieces are worked up so as to form one solid piece. The maximum exterior diameter about the breech is  $9\frac{1}{4}$  inches and at the muzzle 6 inches. Towards the breech end of the gun, a slot or hole is cut through the gun at right angles to the bore: the upper part of the slot being widened out to receive the "vent-piece," a movable but integral part of the gun. The end of the bore of the gun where it meets with the slot is furnished with a copper ring screwed fast into the gun, so that the end of the bore is of copper. The vent piece by which the end of the bore is closed, is a block of metal having a copper ring screwed on to its face. The breech ring has a chamfered edge forming part of a female cone, while the copper ring of the vent piece is a part of a male cone of the same form. Thus when the vent piece is pressed from behind, its ring exactly fits that of the breech and the bore is closed towards the breech. The vent piece further has a vent bored in it vertically and horizontally to fire the charge at pleasure. To keep the vent piece in its place and to secure a gas-tight joint between the two copper rings, the metal of the gun in prolongation of the bore has a female screw thread cut in it to receive the hollow cylindrical "breech-screw." The latter has a corresponding male thread and thus the breech screw can be worked in and out by a weighted lever. A single turn of the screw with a final tap or two with the weighted lever jams the head of the screw on the back of the vent piece, which again jams on the breech ring and thus completely closes the rear end of the bore. To load, after firing, the breech-screw is turned *sinistrorsum*; this releases the vent-piece, which is then taken out by the gunner. The eye if placed behind the centre of the breech-screw can see through past the vent-slot, into the powder and shot chamber and then through the rifled barrel out at the muzzle. The projectile is then entered into the hollow of the breech-screw and with the assistance of the rammer is sent home up to the commencement of the rifling; next the cartridge follows and is sent home up to the base of the projectile. Lastly, the vent-piece is dropped into the slot and allowed to find its own place, when the breech-screw is worked *dextrorsum*; and with the two regulation taps the vent-piece is secured in its position. A

friction-tube\* is then dropped into the vent in the vent-piece and the gun is ready to be fired.

When the charge explodes the shell is driven through the rifled bore, receiving the print of both lands and grooves on its lead coating; a certain amount of lead is thus stripped off, which is vaporized by the great heat and forms that yellow smoke remarkable in firing Armstrong guns. This smoke is particularly inconvenient and unhealthy when fired in close situations such as 'tween decks on board ship or in casemates. It is due to peroxide of lead, a substance familiar to those who have melted lead at a high heat.

The advocates of the breech-loading system, speaking merely from theory, hold that the system of loading at the breech is such that the projectile must leave the bore absolutely "centered," i.e., that the axis of the projectile shall invariably coincide with that of the bore of the gun. That this is not necessarily the case is proved by the fact that in shells which have been recovered after firing, the grooving in the lead-coating of the shell is nearly always deeper cut on one side of the shell than on the opposite side.

This breech-loading system and construction of gun was applied to various calibres of guns from the 6-pounder of 2½ inches bore up to the 7-inch gun of 82 cwt.

\* The friction tube used for firing guns of all descriptions has superseded all other methods formerly in vogue, such as priming powder, quick-match or quill-tubes with port fire, &c. It is a thin copper tube fitting the vent easily: towards its upper end a short tube is affixed at right angles to the former. The long tube is filled with powder paste leaving a small central hole down the axis, a copper wire being passed through the paste for this purpose. Into the short tube is inserted a notched rubber having an eye at its outer end free of the tube. Above and below the notched part of the rubber are placed two pellets of friction powder: the short tube is then closed over the rubber and friction powder. The tube is then painted.

To fire the tube when in the vent, the hook of a lanyard is engaged in the eye of the rubber. By pulling the lanyard the rubber lifts the friction powder; then the powder paste and finally the charge in the gun.

The use of quick-match formerly in use for firing mortars is not unattended with danger, as may be learnt from the following instance. The Ordnance Select Committee at Woolwich after the Sutlej Campaign, hearing of "camel guns," wished to try the 3-pounder gun firing from the back of a steady old troop horse. The gun being loaded with round shot, was primed by a foot or two of quick-match, as it is not easy to fire the gun otherwise in this extraordinary position. The gun being pointed in a safe direction, the match was lighted. The old horse smelling something and hearing something fizzing, began to get uneasy and shift his position; the gun thus veered half way round the horizon. The portly President and Members threw themselves down flat on the ground: and at last the gun went off, throwing the old horse down on his side, without, it is believed, doing any further injury. The experiments were not proceeded with.



In shooting, the whole of these guns were very accurate and in the main up to the 40-pounder siege gun of 35 cwt. they were perhaps as efficient as breech-loading guns could well be. There was one source of accident, however, with these guns which recurred so frequently in the navy that they were much disliked. It was that the vent-piece was liable to be blown out of the slot and if the gunners stood very close they were more or less injured by the flash of the powder. If the serving was well and properly done, this accident could not occur ; but in the heat of action—aye even in the cool of a Shoeburyness field day—the vent-piece has been blown out. The vent-pieces are likewise sometimes fractured in firing.

The sole projectile for the gun was originally the "Segment Shell." The body was of cast-iron, without a bottom and with a large fuze-hole at the nose. "Segments" of cast-iron like the voussoirs or key stone of an arch were fitted into the shell, filling it, up save a central hole. The 12-pounder shell had seven layers of segments, seven in a layer : on the last layer was placed the cast-iron bottom. The shell in this form was placed nose down in a mould, being held in position by a cylinder or block of metal, extending from the fuze-hole to the bottom. The metal of the shell having been previously subjected to a series of chemical processes, lead was poured into the mould and adhered perfectly to the exterior of the cast-iron of the shell ; while it filled in the interstices between the segments and the shell, as well as those between the segments themselves and the cylindrical central block. On the block being withdrawn, there was left a cylindrical cavity from the fuze-hole to the bottom. The latter was secured in position by the lead-coating being allowed to extend somewhat over its surface. The shell was then put in the lathe and turned to gauge. To fit this shell for firing there was put into it, (1)—a burster being a short bit of gaspipe closed at top and bottom by brass caps, having central holes. The burster was filled with powder, escape of the powder being prevented and access given to fire by small pieces of shalloon. Next came, (2)—a Percussion fuze much like that described in our last paper, and finally a time-fuze, made of pewter and of extremely elaborate description. The fuze composition instead of being a long vertical cylinder as in Boxer's time-fuze, was pressed into a circular channel in the metal of the fuze. It is no longer in the service and the reader may be spared any further description of it. This time-fuze closed the fuze hole of the shell. So complicated was the whole arrangement, that a foreign artillery officer alluding to it said it was "*Horologerie*" and the box which contained the shells and their apparatus, he described, as a "*un Pharmacie*."

Now, the reader will recollect that in the breech-loading guns

there is no "windage,"—no empty space between gun and projectile—through which the powder-gas could pass over the shell and light the fuze. Hence a great complication arose. A double action was requisite, one to light the composition in the fuze and another to explode the shell at the proper moment. The result of these complications was that for the ten or eleven years the Armstrong breech-loading gun was in the service, these fuzes were a constant source of annoyance. When fresh from the Royal Laboratory at Woolwich they acted well, but when tried both by time and climate, it was found that, like Moselle wines, they would not keep.

The complete failure of the breech-loading 7-inch gun as a plate-breaker caused the first abandonment of the breech-loading system in England. But a grand step had been attained which will make the name of Armstrong well-nigh imperishable in the annals of artillery. It had been proved that guns could be built up of wrought-iron or wrought-iron and steel. The "coil" system gave great satisfaction when the iron of which the coils were made was not directly exposed to the powder.

Sir W. G. Armstrong's first gun had a steel barrel, but as the manufacture of steel had not attained the perfection it has now reached, the barrels of his subsequent guns were made like that of a fowling piece; *viz.*,—by twisting a bar of iron round a rod helically and then welding the iron together into a continuous tube. The difficulty of this operation was great, for the keen powder-gas at once detected any defective weld inside the bore, enlarged it and finally rendered the gun unserviceable from being dangerous to serve. Subsequently when the manufacture of large ingots of steel was better understood the barrels were of cast-steel, while the external supporting and binding coils were of wrought-iron.

Under this system an absolute and faultless weld in a coil was of no importance; with this proviso the manufacture is simple enough. The heating furnaces are of such a length as shall be capable of receiving a bar long enough to make one coil. At the mouth of the furnace is a windlass by which the coil is wound round the horizontal spindle of the machine, as it comes out red hot from the furnace. The coil is then knocked off the spindle and set end up in another furnace, and when it has attained a welding-heat it is taken out and placed under a heavy steam-hammer end up: a few taps weld the coil into a solid cylindrical mass with a hole down the axis.

When cool the coil is taken to a lathe and bored out to such a size as shall, when hot, fit the steel barrel at the place destined for it. After the steel barrel has been turned externally to its proper size it is toughened by being heated to a dull red and then plunged in a bath of oil. In this condition the coil is "shrunk" on to the barrel. This is effected by setting the latter muzzle downwards in

an upright position and causing a continuous jet of cold water to fill the bore and keep it cool in a subsequent operation. The breech coil, heated to a cherry-red, is dropped on to the barrel and driven down, if necessary, to the exact position it is eventually to occupy: the coil is then allowed to cool gradually and by a clever external application of heat it is made to "nip" at one end and then gradually to compress the steel barrel from that end towards the other, until it squeezes it all over. The force of compression thus got up is enormous and the joint between steel and iron perfect, and not to be disturbed by any amount of concussion in firing; the joint is all the more secure as the taper of the coil is such that the jar of firing jams the coil all the more tightly on the barrel. On this principle coil upon coil can be placed over a barrel to any extent that may be required, even when the dimensions attain the gigantic proportions of the "Woolwich Infant," whose breech-coil when finished measures 4 feet 8 inches in diameter and 7 feet 6 inches in length. We must now return from the description of the system of manufacture, which is equally applicable to guns on the muzzle-loading and breech-loading systems, to the Armstrong guns on the latter system.

The guns and projectile we have described looked so promising at the first glance that many were led to believe that something like finality in the smaller guns at any rate had been attained. But this was not to be. As early as 1862-3 defects made themselves seriously felt both in the guns, and in the projectile and fuzes. Those in the guns and fuzes have already been alluded to. The segment shell, however effective when burst correctly at fighting ranges was a poor substitute for the case shot of the smooth-bore guns. The latter must always retain their superiority in this species of fire owing to the large relative charge\* used. A case shot for the breech loading guns was adopted, thus detracting from the advantage of unity of projectile which was one of the claims of the Armstrong breech loading system. Subsequently shrapnel shells burst by a time-fuze in the air were found to be more efficient than the segment shell burst either by a time-fuze in the air or by a percussion fuze on graze. Common shells again were found to be more efficient in destroying solid objects both by blow and bursting charge than the segment shells. The unity of projectile was utterly lost.

We must now go back a little in time :

Sir W. G. Armstrong's success soon brought forward competitors. Chief among the whole was Mr.—now Sir Joseph—Whitworth. He came forward with his hexagonal or polygonal rifling; patented on the 23rd April 1855, with regard to small arms. But here again the idea of a bore of this form was not new: for on

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\* The relative charge is the ratio of the projectile; upon this ratio mainly the weight of the powder to that of depends the amount of initial velocity.

the 25th October 1852, Sir I. K. Brunel entered into a correspondence with Mr. Westley Richards and finally on the 7th February 1853 wrote to ask him if he could make for him "a rifle barrel octagon shaped inside" whereas Mr. Whitworth only took up the subject of small arms in March 1854, and of ordnance in December 1855. It was, however, Sir Joseph Whitworth who developed the system and such merit as it possesses is undoubtedly due to him. If, instead of looking upon the gun as having an hexagonal bore with the points of the hexagon cut off, we say that the gun is first bored cylindrically and that subsequently six rifled grooves are cut in it, of the shape of a very much splayed out letter A cut off at the bar, we shall get a clear idea of the nature of the bore and be able to understand the *modus operandi* of the rifling on intelligible principles.\*

The driving side of the groove is a little more than one-third of the "flat," and as there are six such flats symmetrically disposed round the axis, the projectile in its motions of translation and revolution is compelled to centre itself; in other words the centres of the cross section of the bore and projectile are identical. This very desirable result is obtained by the French field-gun system for the same reasons.

Sir Joseph Whitworth is one of our most accomplished mechanics, but it may be doubted whether he can ever be a gunner. He will not learn one or two simple things about gunnery which have been explained and impressed upon him by many of his well-wishers of the "cloth," and demonstrated practically before his eyes. One of those simple things is this, gunners insist above all things that their guns shall load easily and quickly;—and no wonder, for lives depend often on their doing so: further, that there must be nothing about a gun or projectile, &c., liable to get out of order; for war is a rough business at best. But Sir Joseph, who is great at a mechanical fit, insists on such in his gun. A well-oiled projectile with a mechanical fit all over can be loaded from the muzzle, provided there is nothing but oil on the surface of the bore: but

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\*In the Whitworth gun there are six grooves each occupying  $41^\circ$  of the circle, leaving each land or ungrooved portion of the bore, occupying  $19^\circ$  of the circle. The driving side is at an angle of  $100^\circ$  to the radius drawn to the origin of the driving side. The loading side is at an angle of  $121^\circ$ , in the gun and  $120^\circ$  in the projectile to the driving side. If we compare this construction with the French field gun system they will be found to be almost identical. In the latter the grooves occupy  $35^\circ$  and the lands  $25^\circ$ , the driving side is at an angle of  $110^\circ$  to the radius and the loading side at  $90^\circ$  to the driving side. In principle the two systems are practically identical; but in the Whitworth projectiles the ribs which fit the grooves are cast solid with the projectile and planed true afterwards. In the French system the zinc studs are "let in" to the projectile, the softer metal zinc being necessary so as not to wear out the bronze of the gun.

a few rounds soon covers it with a hard deposit from the powder which renders loading impossible; a much dreaded "jam" occurs and the projectile can neither be rammed home or got out of the bore: nothing can be done with a muzzle-loader but to pour powder down the vent until a sufficiency has been got in to blow the projectile out. This with a loaded shell fuze is a very dangerous operation, for unless a considerable quantity of powder is got into the bore the shell will explode in unpleasant proximity to the gun and those who stand around it.\* From a dead mechanical fit, Sir Joseph Whitworth as a concession eases off the loading side of what we have termed his grooves. The amount of windage thus conceded is about one-half that in the guns in the service. Further, his own experience as a mechanist tells him that if metal is to run against metal at a high speed, lubrication is necessary and accordingly a lubricating wad of wax and tallow is attached to the cartridge for that purpose. Similarly Sir W. G. Armstrong's breech-loading guns were, after a short experience, invariably fired with lubricators. These lubricators, however, were found to be a source of great annoyance, for though great ingenuity was displayed in their construction, they never gave satisfaction except on the practice ground or at home-stations. In hot climates the wax and tallow melted and after oozing out from their copper envelope, destroyed the powder in the cartridge. Before their adoption the Armstrong gun bore was sluiced with water after every few rounds, so that, except sweeping a chimney, no dirtier work could be undertaken than serving an Armstrong gun, involving a special dress to save the men's uniform. It was the necessity of lubrication which disgusted the only Power which adopted Whitworth's system for its Navy, *viz.*, Brazil. The officers of that service

\* A gallant Colonel of artillery, in command of some heavy howitzers at the siege of Lucknow, was ordered to "lob" an 8-inch shell over some buildings into the midst of the enemy who were making themselves extremely disagreeable. He ascended to the top of a house just behind the howitzer to get a better view and from thence gave the word to load with common shell and directed the gunners to move the piece until it was "laid" in the proper direction; whether the officer in charge of the gun was inexperienced or merely bewildered is not known. But the gunner forgot to put in the charge of powder. In those days the method of firing a gun was by putting a small quantity of powder by hand on the vent-field,

a good deal of which naturally fell through the vent into the bore, and firing what remained by a "port-fire." The howitzer thus primed was fired and lobbed its shell out just in front of the muzzle with the fuze alight! All present by instinct threw themselves on their faces and awaited the result in a state of mind which had better be described in the gallant Colonel's familiar but graphic words "There were we on our bellies and the infernal thing fizzing away, close by. I was never in such a mortal funk in all my life. I wonder it did not turn my hair grey. Presently it went off with a fearful explosion, and we all got up, not a soul touched!"

reported officially that they preferred their old smooth-bores as their Whitworth guns were difficult to load and liable to have their projectiles "jammed" in loading. It is believed that they used no lubricators.

The Prussian, Russian and Belgian artilleries are armed with breech-loading field-guns on one and the same system, or so closely allied to each other as to admit of their being classified together. This system is of Prussian origin. The gun is formed of a block of cast steel, the cross-section at the breech being square while the remainder of the gun is a slowly tapering truncated cone. Without entering into any great detail, enough will be gathered of the method of loading at the breech by stating that the gun is bored through from end to end. That a breech slot is cut through the square block, forming the breech, not vertically as in the Armstrong gun, but horizontally. Into the slot fits a breech stopper, which when pulled out to a certain extent, regulated by a spring stop, causes a circular hole in the stopper to coincide with the end of the bore: the gun can then be loaded. The remainder of the stopper is composed of one fast and one loose inclined plane, the latter being actuated by a screw. On the stopper being pushed home in the gun and the screw being worked, the moveable inclined plane jams the stopper tight in the slot and thus the breech end of the bore is closed. The face of the stopper in this position has a copper plate forming the bottom of the bore and slightly overlapping the circle forming the end of the bore. This arrangement is said to give satisfactory results.

In the Russian guns in lieu of a copper facing, a soft steel plate in the stopper and an elastic expanding steel ring in the gun, the invention of Mr. Broadwell an American, are adopted to form the gas check and close the breech of the gun. The action of the plate and ring is precisely that of the leather Bramah ring in an hydraulic press, a happily devised combination by which the greater the pressure the tighter becomes the joint between plate and ring.

The Prussians during the war in 1870 fired nothing but common shells. For some years previously they had experimented with shrapnel shells with time-fuzes: but early in that year they decided against them, basing their decision chiefly upon the impossibility of timing their fuzes to burst the shells with satisfactory accuracy in action against troops in motion. They have, however, since learnt to regret that decision and have taken up the subject once more. The Russians and Belgians fire shrapnel shells with time-fuzes. We must now return to England.

The result of the complaints against the breech-loading Armstrong system and of the urgent demands of Mr. Whitworth and his friends was the nomination of a committee to make trial of the

rival systems. Two natures of guns were used, 12-pounders and 70-pounders. Sir W. G. Armstrong was represented by one muzzle-loading and one breech-loading gun, and Mr. Whitworth by one muzzle-loading gun of each of the above sizes. After experiments of long duration, costing about £30,000, a decision to the following effect was come to :—

“That the many-grooved system of rifling with its lead-coated projectile and complicated breech-loading arrangements entailing the use of tin cups\* and lubricators, is far inferior, for the general purposes of war, to both the muzzle-loading systems, and has the disadvantage of being more expensive, both in original cost and ammunition.”

Some few years after, this decision was backed by that of another committee of superior officers, who made no experiments but heard evidence, to the effect :—

“That the balance of advantages is in favour of muzzle-loading field-guns and that they should be manufactured hereafter.”

This recommendation was not acceded to, but pressure coming on from India and the Admiralty, a committee was appointed which in 1869 brought forward the 9-pounder muzzle-loading rifle gun of eight cwt. as the field gun for India.

That gun the committee recommended should be made of bronze, as that metal was in stock in India and as its gun factory had full knowledge in working that metal. Fifty of these guns were cast at Woolwich and sent out to India, where they completely failed in consequence of large veins of tin—one of the two ingredients of bronze, the other being copper—being burnt out to such an extent as to render the guns dangerous to serve after having fired from 50 to 250 rounds ; while of three similar guns made at Cossipore 2 burst explosively, and the third failed in the same manner as the Woolwich guns.

This was a most astounding result after the experience obtained with the bronze guns tried at Shoeburyness, one of which fired upwards of 2,673 rounds and another 1,362 rounds “ without their accuracy being seriously impaired.”

The causes of this failure may be thus explained. The components of bronze are copper and tin in the ratio of 9 : 1. These metals can only form one single chemical compound in the ratio of 68 : 32 or to speak roughly as 2 : 1. This compound is very hard and brittle and useless for the manufacture of guns. In any other ratio these ingredients may be likened to oil and vinegar when shaken together in a vessel : they will only mix mechanically. Suppose copper and tin ingots in the ratio of 9 : 1 to be put into a furnace and cast together in a mould of large size. The casting

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\* Tin cups were used with the heavier breech-loading guns as a gas-check, to prevent escape of gas owing to wear of the joint at the breech.

will be heterogeneous: the tin will be found to run in veins through the mass: in short the ingredients have not been thoroughly mixed. If this operation be repeated a dozen times, at each casting the intermixture will be more complete.

If, however, the tensile force of the bronze be tested by a proper machine, it will be found that the metal of the last casting will in this respect be much inferior to that of the first few castings. Good bronze is found to be capable of withstanding a force of about 16 tons on the square inch.

A further point is this: the melting point of copper is about  $2,000^{\circ}\text{F}$ , while that of tin is  $442^{\circ}\text{F}$ . If, then, these two metals be not properly mixed, or in other words if the bronze be veined with tin, the reader will not be at a loss to understand how these veins will be burnt out into cavities, a small portion of melted metal being vaporized and expelled at the muzzle at each round.

If, on the other hand, the metal be thoroughly mixed by repeated fusions, the resisting force of the metal may have become so reduced, by repeated fusions and despite a small addition of new metal at each fusion, as to render it incapable of resisting the strain of the first explosion of the charge.

Now, it so happened that when the guns were about to be made at Woolwich for trial at Shoeburyness, there was not enough Indian gun metal in hand for the purpose. By Indian gun metal is meant metal that had been melted over and over again in that country, with a certain addition of new metal, in re-casting the guns as they become unserviceable with the batteries in the field. At Woolwich the stock of bronze guns was always enormous and until the Crimean war they had not been used in action since the battle of Waterloo. The number of batteries in existence on the peace-footing was very small\* and the allowance of practice ammunition equally insignificant. These guns, then, were composed of metal which had not been melted more than two or three times. The character of the metal was soft, cutting like cheese; while that of the Indian metal was hard, the chip falling to pieces as it was cut off. The tensile strength of the former being considerably greater than the latter.

The accident—for accident it was—of the insufficiency of Indian gun metal in stock for casting the experimental guns resulted in the deficiency being made up of Woolwich metal; and thus was produced probably the happiest mean between fairly good mixture of the ingredients on the one hand and adequate strength on the other.

The 50 Woolwich guns which failed were cast, it is believed, from

\* It is said that seventeen guns Duke of Wellington's funeral could not be got together for the



old guns with a small addition of new metal. The three Cossipore guns were purposely made of two sorts of metal. Two guns were of such metal as the smooth-bore guns had been made of for many years with one-tenth of new metal added ; those two guns burst in firing. The third gun was cast from very old English guns, the metal of which was precisely the same in character as the Woolwich gun metal. This gun failed from tin veins being burnt out like the Woolwich guns. The alternative was thus fatal to bronze as a metal for rifled guns.

Still there remains to be noticed this point. The bursting of a bronze gun was deemed by the gunners of all nations to be next to impossible. Granted that the strain on a rifled gun is infinitely greater than on a smooth-bore, still the French, Austrians, Italians, Spaniards had adopted bronze rifled guns, and they had no guns burst. Why then did these two Cossipore guns burst ?

The answer is, that the Indian powder with which they were fired has proved, since the guns burst, to be of a most violent nature, approaching to detonating powder in the suddenness with which the charge is converted into gas. In the early part of these papers it was stated that the burning and consequent conversion into gas of gunpowder was not instantaneous, but very rapidly progressive. Were it instantaneous probably any ordinary gun and projectile would be shattered to atoms before either the one or the other had had time to move and " give " to the force, the gun in recoil and the projectile in propulsion. The metal or metals would be, as the French express it, taken by surprise. This quality of the Indian gunpowder is probably due to the wood of which the charcoal is made, but more particularly to the manner of carrying out the process by which the wood is converted into charcoal. This gunpowder, taken from the same batch as that by which the guns were burst, when tried in a steel gun of the same dimensions and construction as the bronze gun, has since been proved to exert a strain of no less than 18 tons on the square inch, or about double of that due to the English powder of the same nature. As good bronze is only capable of standing 16 tons on the square inch, we have a full explanation of the cause of the burst.

Bronze having failed, the gun is now made of a steel-barrel with a wrought iron jacket and trunnions. The gun in every particular is identical with the bronze gun, saving the *external* form which has been modified to suit the materials of which it is made.

The bore is three inches in diameter and 21 calibres in lengths. It is rifled with three centering grooves of the French form slightly modified. Its projectiles weigh close upon 9lbs, while the gun weighs eight cwt. or about 100 projectiles, and its initial velocity with a relative charge of one-fifth varies between 1,350 and 1,380 feet per

second. Its trajectory is remarkably flat. A good proof of this was obtained by pacing the tracks cut through long grass when firing at an object 1,000 yards distance at Shoeburyness. The shell had mown its path through the grass, which was nowhere higher than two feet, for a distance of between 40 and 50 yards.

The accuracy and uniformity of its shooting are remarkable. At  $2^{\circ}$  of elevation the mean range is 1,176 yards, the mean difference of range of a number of shots is 14 yards and the mean observed deflection is one yard. At  $3^{\circ}$  of elevation the mean range is 1,552 yards; the mean difference of range is 17 yards; and the mean observed deflection is  $2\frac{1}{4}$  yards; finally at  $7^{\circ}$  of elevation the mean range is 2,665 yards; the mean difference of range is 19 yards and the mean observed deflection is 14 yards.

Now, the reader must be reminded that these are the results of experimental practice. However strong the wind may blow across the range, the gun is invariably directed at the same point. The shell in traversing a distance of 2,665 yards or more than a mile and a half took nine seconds in its flight, during which time the wind blew it out of its straight course: this, therefore, was no fault of the gun. Had it been a dead calm the shooting as regards deflection would certainly have been better.

To eliminate the effect of wind we must calculate the average lee way due to it; and then refer the position of each shot to the mean position, not of the object aimed at, but of the average shot and take the average deviation from it. We shall then get what is termed the "mean deduced deflection." This system is used in comparing the accuracy of practice of all guns: it further eliminates the permanent deflection or drift due to the direction of the rifling, mentioned in a note in our first paper.

The mean deduced deflections, then, of this gun at ranges of 1,176, 1,552 and 2,665 yards are found respectively, half a yard, three-fourths of a yard, and three-fourths of a yard. The above figures will give the reader a true idea of the accuracy of the gun, independent of wind, &c.: and it may be added that at the date of this practice it had never, it is believed, been equalled by any field-gun in England or elsewhere. As to rapidity of firing, 50 rounds have been fired in seven minutes: and as to rapidity combined with accuracy, 50 rounds were fired in thirteen minutes, making 27 hits in a nine foot target at 1,000 yards. Further 140 rounds were fired from one gun without stopping, at the rate of three rounds in a minute—that is, continuously for three-quarters of an hour. The metal became so hot as to boil water.

The shrapnel shell fired at a column of troops, represented by targets 54 feet wide by 9 feet high, in four ranks 20 yards apart, made 48 hits *through* 2-inch boards at 1,200 yards, 40 *through* at 1,600 yards and 10 *through* at 2,000 yards: when it is stated that

the shell contains 63 bullets, it will be conceded that a very large proportion of them "have their billet."

However successful this gun, it is wise to recollect always the doctrine contained in the following distich :—

Croire tout découvert est une erreur profonde,  
C'est prendre l'horizon pour les bornes du monde.

*Lemierre.*

The advantage gained by this gun over previously existing guns in shooting was mainly due to an increase of the powder charge. The projectile weighs 9lbs. and the charge is  $1\frac{1}{2}$ lbs. or a relative charge of about one-fifth. Its predecessor, the Armstrong 12-pounder breech-loading gun fired a projectile of 12lbs. with a charge of  $1\frac{1}{2}$ lbs., the relative charge being thus one-eighth. If we wish again to improve on the 9-pounder gun, we must increase the charge still further. We might try and advance to a relative charge of one-fourth or one-third as was formerly used in the smooth-bore guns. This has been tried quite lately with the result of an increased velocity; the former giving an initial velocity of 1,495 feet per second, and the latter 1,531 feet. This is still far short of what might be obtained. For a rifling of 1 turn in 30 calibres with a velocity of between 1,350 and 1,400 feet per second, giving, as previously stated, 180 revolutions per second, amply suffices to keep the projectiles nose foremost; anything beyond this is mere loss of force. Thus with 1,530 feet per second 180 turns would be made by a twist of rifling of 1 in 34 calibres and with a velocity of 1,700 feet, the same result would be obtained by a twist of 1 in 38 calibres.

But there is a further circumstance with the muzzle-loading gun which hinders the attainment of an increase of velocity at all proportionate to the increase of charge. It is the great length occupied by the charge when rammed home in the gun. With the Martini Henry breech-loading rifle this difficulty was easily surmounted by giving the powder-chamber a larger diameter and thus increasing its capacity without lengthening it. This presumes an adequate strength of metal about the powder-chamber to resist the increased strain. This device is exactly that which the Prussians have adapted in the construction of a new piece with which they are experimenting. If we are to believe the newspaper accounts, the following is a description of the piece :—

"The new gun weighs, we believe, a little more than our 9-pounder, namely, about  $8\frac{1}{2}$  cwts., but they propose to fire from it a shell of 11lbs., with a charge of over 3lbs. of powder. They thus obtain the enormous velocity at the muzzle of 1,700 feet per second, while our 9-pounder starts with a velocity of something under 1,400 feet."\*

The great practical difficulty of using such high charges is dealing with the recoil ; for when the recoil is great, it is a serious hindrance to rapidity of fire and running the gun up into position after every round when firing for a long time is a most exhausting labour to the gunners. Various systems of breaks are under trial in England to reduce the recoil by getting up great friction : but none have hitherto been successful.

The French are experimenting with field-guns with the same idea as a starting point. We will now proceed to consider, as dispassionately as a strong conviction on one side will admit of, the respective merits of the breech-loading and the muzzle-loading system of guns.

The breech-loading system involves the ability to close and open the breech end of the gun at pleasure. Be the method what it may, there must be a joint between the moveable and the immoveable part of the breech. All joints, angles and so forth, inside the bore of a gun are at once the object of attack by the powder-gas : thus, what originally was a good joint becomes more or less, sooner or later, impaired. Screws, inclined planes, &c., are apt to get bent or injured by the rude shocks of firing and the mechanism jams or will not act freely. In this point of view every one must concede that the advantage lies with the muzzle-loading gun, where the end and sides of the bore are enclosed in a solid mass of metal. The only difference that can arise between any two persons in the matter is as to the extent and importance of the amount of injury and inconvenience inherent to the breech-loading system.

Again the reader knows that the "obturation" of the bore is complete in the breech-loading gun in firing ; or in more familiar but technical language, the gun has no windage. For a time-fuze, which we have shown to be so desirable in firing shrapnel shells, a detonating arrangement is necessary for lighting the fuze and this at least is a complication. On the other hand, in very heavy guns whose business is armour piercing, no fuze is required ; but the lead-coating of the breech-loading projectile to a certain extent impedes it in penetration, since force is lost in skinning off the lead-coating as the projectile makes its way through the iron. If on the one hand this be disadvantageous to the projectile, on the other the windage is most disadvantageous to the durability of the muzzle-loading gun firing large charges. The gas rushes over the projectile like the flame of a tremendous blow-pipe and eats away the steel of the gun just above and in front of the projectile. If an impression or "squeeze" of the part of a gun, which has fired a considerable number of rounds, is taken in gutta-percha, its appearance is that of the bark of an old elm tree. The cause of this "erosion" is partly mechanical, partly chemical, and we are inclined to think chiefly the latter.

It will be recollected that one of the ingredients of gunpowder is sulphur, and every schoolboy has probably tried the experiment of rubbing the end of a roll of sulphur against a red-hot poker by which a sulphate of iron is formed: the sulphate pours off in a liquid form and thus wastes away the poker. This result is proved to take place when gunpowder is exploded inside a short closed iron gun-barrel: for when the residuum is chemically analyzed, among other substances is found sulphate of iron. We hold that this is the main cause of the erosion of the bores of muzzle-loading guns. It takes place to a much smaller extent in breech-loading guns, due to the non-existence of the blow-pipe action above alluded to. In field-guns, the charges being small, the erosion is insignificant, but it assuredly is the greatest disadvantage attendant upon the muzzle-loading system for large guns. Various methods have been tried for its prevention, but hitherto none have been successful. We are thus led to the conclusion, that for small guns the existence of windage in the muzzle-loading gun is an advantage not possessed by the breech-loading gun: and that for heavy guns the windage is highly disadvantageous and thus the breech-loading system in this respect is preferable to the muzzle-loading system.

Further, for plate-breaking guns, the moveable breech-closing apparatus must perforce be ponderous. The strain on it is enormous: it is consequently apt to jam or work with difficulty. On this point it is clear the advantage lies with the muzzle-loading system.

Once more, the breech-loading system has the great advantage whether in a turret, broadside, casemate or siege-battery, that the recoil of the gun on its carriage may be mechanically checked at such a distance as shall be convenient and that it is not requisite to bring the muzzle of the piece inside the defensive mass through which it fires, to enable the gunner to load. The gun can consequently be made much longer, and therefore more efficient than a muzzle-loading gun of the same calibre. The longer breech-loading gun is more efficient, since the projectile is by so much longer under the influence of the expansive gas. Late English papers, however, give a description of a method of loading a muzzle-loading gun by hydraulic power, the invention of Sir W. Armstrong, which bids fair to neutralize the advantages the breech-loading gun has in loading in confined situations. In a siege-battery, however, the breech-loading gun may be fired over the top of the parapet, the breech of the gun being at such a height that it may be loaded by the gunners when almost completely protected from the enemy's fire. This cannot be effected with the muzzle-loading gun; and therefore the advantage lies again with the breech-loading gun. As regards rapidity of fire, the muzzle-loading gun has been repeatedly proved to be the quicker with field-

guns ; with heavy guns no comparison has been made so far as we are aware between the two systems. The rapidity of fire of heavy guns on the muzzle-loading system leaves, however, nothing to be desired.

We must leave our readers to strike the balance of advantages between the two systems, without pronouncing our opinion either one way or the other. The great continental powers of Europe have adopted the breech-loading system, while England nearly alone has changed from the breech-loading to the muzzle-loading system.

We will now close these papers, with the expression of a hope that we may have in some remote degree fulfilled the task we undertook of giving the "general reader" some elementary ideas upon the subject of Rifled Artillery.

HENRY II. MAXWELL,

*Colonel, Royal Artillery.*

## ART. V.—THE PANJAB UNIVERSITY COLLEGE.

THE movement which has given the rudimentary form of a University to the Panjáb is in some sense an episode of the war of Anglicists and Orientalists,—which can never be decided so long as the principles of education in India are discussed—but is more particularly due to the characteristic activity and ambition of Panjáb officials. For some years after the annexation, the Panjáb, owing to its great political importance, attracted the ablest and most enterprising of the servants of Government; and it is not surprising that such men, unfettered by unwelcome regulations and by the still more unwelcome lessons of experience, attempted to make their province a model of progress and enlightenment. Here, if anywhere, the dreams of “India as it might be” should be realised. There was much that was good, and much that was otherwise, in these aspirations. The assumption of superiority to ordinary mortals, which sat well enough on the Lawrences and Edwardes’ and other familiar names of which any country might be proud, was usurped by smaller men with results disastrous to themselves and to the credit of their colleagues. It is not given to every one to conjure with Nicholson’s wand.

However, ten years ago, great efforts were being made for the moral and intellectual regeneration of the Panjáb. Conferences were held to inaugurate social reforms, a vast scheme of female education was elaborated, a School of Art and Design was all but founded; and the movement culminated in an Exhibition of Industry, upon the plan of those held in Europe, which came off in the year 1864 with great *éclat* and success. About this time Dr. Leitner arrived at Lahore, having been appointed Principal of the newly established Government College.

Dr. Leitner, although a stranger in India, had spent many years in Muhammadan countries, and nowhere could he have found a fitter field for his enterprising and versatile genius than in the society into which he was now thrown. Of the chief promoters of the Panjáb University scheme it may be said broadly, that Sir Donald Macleod contributed the ideas, Mr. Aitchison the form, and Dr. Leitner the energy; but the ideas and the form of the projected University were, to a certain extent, the common property of all the supporters, while the mainspring of the movement was Dr. Leitner alone.

The first thing which Dr. Leitner did to carry out the object which he had in view was to establish a kind of literary club at Lahore, consisting of European and Native gentlemen, called the Anjuman-i-Panjáb.

The Anjuman was founded in January, 1865, and at the first meeting the object of the Society was declared to be twofold :—

I.—The revival of ancient oriental learning.

II.—The diffusion of useful knowledge among all classes of the native community through the medium of the vernaculars.

To attain the end in view, the members were divided into a number of Committees. There were Committees for Medicine, Finance, Business, Education, with Sub-Committees of Examiners in Arabic, Sanskrit, Persian, Hindi, Urdu, and Pushtu. A Free Public Library was established, containing 1431 volumes, of which 798 were the property of the Society and the rest were lent by members, and a Free Public Reading-room supplied with newspapers and Reviews. During the year 1865, 40 papers were read at the general meetings of the Society. Among the subjects chosen for discussion were the following—The laws of health, the authoritative control of morality, the rise, decline and revival of learning among the Arabs and Indians, the introduction of machinery and foreign arts into India, the evils of the educational system of the Panjáb, polygamy, the purdah system, cotton-presses, agriculture, the improvement of the vernaculars.

But the chief business of the Society was the foundation of "the Oriental University," as it was then called ; and the spirit in which the work was undertaken will appear from an address delivered by Dr. Leitner in the month of August. The address is too long to give in full, but the pith of it will be found in the following summary :—

"Ra-ises, the subject which I have to bring to your notice  
"to-day is of the greatest importance to yourselves, the Govern-  
"ment, and the people of this country. It is a great honour  
"to me that you have favoured me with your presence at this  
"meeting, which I hope will be in the annals of this country  
"an illustrious and noteworthy gathering. Give your best at-  
"tention, and be sure that you are giving it to one who is  
"not only a friend of the people of India, but who is also  
"deeply anxious to be accepted into the friendship of every one  
"of you. \* \* \* \* \*

"Our Government is founded on the most liberal principles.  
"It not only tolerates every shade of opinion among its subjects,  
"but it considers all its subjects equal. It will admit any one  
"to the very highest employments, if he be competent for them  
"without distinction of race and creed. The people of England,  
"the Parliament of England, the Government of India are an-  
"xious to admit all to the same privileges as all are interested by  
"the same loyalty to the same Queen.

"Why is this ? because among all the nations of the world  
"England has alone profited by the lessons of past history, and



"her greatness is due to understanding that the welfare of *every one* subject is necessary to the welfare of the whole country.

"Knowledge is power everywhere, but particularly in India. You are looked upon as the leaders of your several nations. It is therefore necessary that you should lead the van of education and progress. Government can only shew the way, but it is the people who are to walk in it. The object of Governmental instruction is to stimulate *private* educational competition. Let me quote from the Despatch of the Secretary of State for India. Is it not clear to you that we ought to establish what I hope will be established by this meeting, *The People's Department of Public Instruction*, which will be established by you, presided over by you, encouraged by you, and supported and perfected under your sole care and responsibility. There is no opportunity like the present for doing this. Under that best of men and scholars our honored and beloved Lieutenant-Governor, Mr. Donald Macleod, who loves the people, wishes to perpetuate its ancient sacred languages, to perfect its present vernaculars, and to introduce new knowledge without detriment to old knowledge, we have an opportunity such as Providence rarely gives to any people. Nobles ! if under such a man you do not raise the condition of the inhabitants of this country, you may never have another such opportunity.

"The Lieutenant-Governor's last circular shews that he has two great objects :—

"*The revival of ancient oriental learning.*

"*The perfection of the vernaculars of this country.*

"We do not want people merely to know a little English, but to respect their parents, their Ra-ises, their priests, and their elders, to be honest, and to be able to manage the work that Government may entrust them with. Therefore I again say that the only thing is to establish, *The people's own Department of Public Instruction.*

"The first thing that the Department will do will be to establish an university at Lahore for the Panjáb. That university should have for its patron, the Lieutenant-Governor, and for its Governors the Native Rajahs of the Panjáb, and for its Senate the nobles of Lahore. What will distinguish it from the official department will be its complete avowal of the principle of *absolute liberty in giving and receiving instruction.* Any person of ability may teach under our auspices. Any person may be taught, for as long or as short a time as he may like. Any person may be admitted to the examinations, and if competent may receive degrees and titles. In short, if this country is ever to be what we wish it to be, there must in this our educational measure be

"ENCOURAGEMENT EVERYWHERE 'AND RESTRICTION NOWHERE.'"

" Unless the *voluntary principle* surrounded by certain safeguards is the basis of our movement, the nation will remain in its childhood. Government will always doubt that the people is progressing as long as we do not shew that we are men, not children. Therefore, we must act for ourselves, and gain by overwhelming merit the position to which we aspire. Then the people of England will bountifully bestow its marks of appreciation on a deserving people.

" Let us work together without being jealous of each other's goodness, but for one common object.

" On me you can always depend : here or in England, in public or private, I shall in my humble way always serve your cause.

" But if you act in concert for a great good and noble common object with implicit reliance on yourselves and each other, you will succeed.

" Praise will be given to *all* where *all* support and praise each other, and friendship will sanctify the bonds which have been drawn together by a necessity of common action."

This spirited appeal had the desired effect. Dr. Leitner's proposals were adopted by the Rājās "unanimously and with unparalleled enthusiasm." A few weeks later he submitted his "rough draft of a scheme for the establishment of an Oriental University for Upper India." It will be seen that considerable progress had been made in the interval.

#### THE ORIENTAL UNIVERSITY.

Founded in the year 186 — by the Rājās of Lahore, the Rājās of ———— and ————.

##### *Patron :*

Her Most Gracious Majesty the Queen.

##### *Vice Patron :*

His Excellency the Viceroy of India.

##### *Chancellor :*

His Honour the Lieutenant-Governor of the Panjāb.

##### *Official Governors :*

The Maharajah of Kashmir.

The Rajah of Kapurthala.

Ditto ditto (not yet determined.)

##### *Life Governors :*

The Founders of the University.

*The Council :*

The Chancellor, Vice Chancellor, Official Governors, Life Governors, and other men of rank or great literary eminence who may be elected into it.

*The Senate*

Is a body composed of the representatives of the several Literary Committees.

*The Literary Committees*

Supervise the different Examining Boards and fall into two main divisions :—

A.—The Committees for Vernacular Literature

B.—Ditto ditto for Oriental Classical Literature.

The draft further sketched the details of the scheme, arranging for the bestowal of *khilats* and titles of honour to those who might pass the examinations, and the establishment of colleges in every large city of Upper India upon the principles advocated by Dr. Leitner.

Shortly afterwards a European Committee of Support was formed, of which Mr. Lepel Griffin was Secretary and Mr. Aitchison and Mr. A. Brandreth were among the members. The organisation of the Oriental University was prosecuted with undiminished activity and an address from the R<sup>a</sup>-ises of Lahore and Amritsar elicited from Sir Donald Macleod an extremely interesting and valuable expression of opinion dated the 2nd February 1866, which concludes as it were, the first act of the drama.

Sir Donald Macleod declared his great satisfaction with the progress which had already been made towards the establishment of a university, and paid a well-merited compliment to Dr. Leitner for his share in the work. He reminded the R<sup>a</sup>-ises that in 1835, under the auspices of Lord William Bentinck, then Governor-General of India, the rules and principles to be followed by Government and its officers in the work of education were placed on a new basis. Among the promoters of the new system were to be found the well-known names of Macaulay, Trevelyan, and Duff. Dissatisfaction was justly felt and avowed by them at the meagre results which had previously been attained by efforts made to convey instruction to the people through the languages of the country, and it was determined that henceforth the English language should be chiefly relied on as the means of imparting the knowledge of the West.

“Up to that time no serious effort had been made to employ those languages as a medium for imparting the knowledge which European nations most value, so that it is no matter for surprise, that such dissatisfaction should have been felt. But there

“were, at the time, not a few who were of opinion, that the scheme of education then determined upon was too exclusive as well as practically ungenerous from omitting and decrying all that you value the most. And, although great progress has undoubtedly been made since then, although many distinguished and enlightened scholars have been raised from amongst your countrymen, and the desire for education has greatly increased on every hand, there are now a still larger number amongst us, and I must avow myself to be one of this number, who consider that the results which have been attained shew that opinion to have been correct, inasmuch as, notwithstanding some brilliant exceptions, the great bulk of our scholars never attain to more than a very superficial knowledge, either of English, or of the subjects they study in that language, whilst the mental training imparted is, as a general rule, of a purely imitative character, ill-calculated to raise the nation to habits of vigorous or independent thought.”

It was doubtless hoped by the eminent men who inaugurated the revised arrangements, that a vernacular literature of a superior order would result indirectly from the cultivation of the arts and sciences of other lands; but hitherto little or no progress had been made to the attainment of this end. In Sir Donald Macleod's opinion nothing like a vigorous, original or copious vernacular literature was likely to be produced within our generation unless very special efforts were made for securing that end, while the system now in force appeared to him but ill adapted to such a purpose. Vigorous mental training was little aimed at, and the youths who attended our schools and colleges seldom or never belonged to those classes which are used to devote themselves to the cause of learning. In consequence the most cultivated minds of either race have remained apart, each being unable to understand or appreciate the other. This was much to be lamented, and where a different policy had been pursued Sir Donald Macleod had himself witnessed most remarkable and gratifying results. He referred to the labours of Sir Lancelot Wilkinson in Bhopal and of Dr. Ballantyne at Benares who had collected around them a body of Pandits who studied with the keenest interest what they considered “the new philosophy.” The Arabic, Persian, and other oriental languages might be employed in the same spirit and with the same results. The efforts of individuals, however, could be of little avail unless they were carried on by others of a like mind. Such a fate had befallen the labours of both those remarkable men; but with the Rāises of Lahore and Amritsar the case was different, and it was in their power, if they acted prudently and wisely, to give permanence and solidity to the measures on which they might now resolve.

But they should not conceal from themselves that their consultations must be carried on with great care and deliberation. They should guard against even the appearance of being too pretentious, yet should bear in mind that they had a serious and great work before them, and not rest content with merely evincing enthusiasm themselves or exciting it in others. They should not allow the spirit of earnestness and hopefulness with which they had entered on this undertaking to diminish, but should proceed cautiously and prudently, and in humble trust for guidance on that power who rules all our destinies.

We may now pass on to the minutes and correspondence immediately connected with the establishment of the Panjáb University College as at present constituted.

A movement of a similar character to that in the Panjáb had been started by Sayyid Ahmad, and had resulted in the foundation of the Aligarh Institute and the British India Association of the North-West Provinces. In a petition to the Viceroy, dated 1st August 1867, the Association asserted that the present system of using English as the medium of instruction in the universities of India was ill-calculated to raise the intellectual condition of the people, and desired that the science of the West should be taught in the vernacular. They admitted that at present there were not books sufficient for the purpose, but they thought that the production of a learned vernacular literature was not difficult.

To this memorial the Government of India replied that the importance of the vernacular languages, as a medium for conveying instruction to the people was prominently recognised in the Education Despatch of 1854; but a broad distinction was drawn between the vernacular languages as the necessary and only medium of instruction of a popular kind, and the English language as an essential requisite for education of a high order. But between these two limits of popular education on the one hand and education of a high order on the other, there were many degrees of knowledge for the communication of which through the medium of the vernacular or English languages no specific rules could be laid down. It had hitherto, as observed in the Despatch, been necessary, owing to the want of translations or adaptations of European works in the vernacular languages of the East, for those who desired a liberal education to begin by the mastery of the English language; but this necessity was not regarded as one likely to be of permanent duration, and as the vernacular literature of India became gradually enriched by the compositions of men whose minds had been imbued with the spirit of European advancement, European knowledge would gradually be placed within the reach of all classes of the people. As regarded the specific proposals of the British Indian Association, the

Governor-General in Council thought it must be admitted that the vernaculars of the country did not as yet afford the materials for a university course of study; but it was impossible for Government to undertake the whole work of education, and all efforts made by Societies or individuals to further the common object would be cordially recognised and assisted.

This correspondence between the Aligarh Society and the Government of India became the subject of several minutes, written at the request of the Lieutenant-Governor of the Panjáb, who desired to receive such opinions and suggestions as the occasion might appear to call for. Among the suggestions of the officers of the Panjáb Education Department, which have since been adopted, are the abolition of Text-books for the Entrance Examination of the Calcutta University, and the recognition of Persian as a classical language. It was also generally agreed by them that the vernacular should be used as far as possible for instruction in subjects of useful knowledge; and a proposal was made, which has also been advocated by Sir William Muir, to allow the B.A. Degree to students who after passing the First Examination in Arts with English, might take up the Honor course in science or oriental literature.

The Anjuman of Lahore responded tardily to the Lieutenant-Governor's request for an expression of opinion. The Aligarh Society had hazarded some inaccurate remarks upon their scheme for an Oriental University. In the words of the memorial "The aims and objects of this (Oriental University) are excellent, but those of the university which we solicit for these provinces are superior. The first has for its scope the revival and culture of oriental languages; the latter seeks to be the means of diffusing throughout the country European learning and civilisation." Dr. Leitner, writing on behalf of the Anjuman of which he was President, referred to all that had been done in the Panjáb since 1865. "It had met objection after objection in various ways and saw at last its efforts rewarded by a general concurrence in this and other provinces in the principles which it had laid down as those on which alone a sound education could be based in this country. It saw itself after all called upon to give an opinion on *one* point of detail in its own scheme to which the British Indian Association had given support and prominence. Confident of the acceptance by His Honour of the necessity of enriching the vernaculars from oriental classical languages, it merely endeavoured to shew that one vernacular alone, as suggested by the British Indian Association, could not suffice for the whole of India; and Babu Navina Chandra had submitted a paper which meeting with general assent endeavoured to establish claims in favour of Hindi. The Anjuman then, as always, would not commit itself either to *any one* vernacular or to *all* the

“vernaculars without those classical sources which alone can develop them. The Anjuman could therefore only reiterate its adherence to the original principles which it had consistently maintained. But in the opinion of the members, Lahore was entitled to be the seat of the university as the capital of the province and the place where the movement had been started. It was always understood that the university would be established at Lahore. On this understanding subscriptions were asked for and received. Lahore alone contained the elements for the formation of a Council. Amalgamation with the North-West Provinces was undesirable because there was sufficient scope in the Panjáb for a separate university, and because there was a radical difference in principles and aims between the Panjáb movement and that of the North-West.”

It is necessary to enter into the details of these disagreements in order to shew how impossible it was at that time to establish a university for the whole of Northern India. The minute of the Anjuman of Dehli which bears marks of the vigorous mind of the late Mr. Willmot indicates that it was equally difficult for Dehli to amalgamate cordially with Lahore.

“The Dehli Society hailed with satisfaction the announcement that a new university was in contemplation rather than modifications in the university of Calcutta, and that it was not intended to substitute the study of the oriental languages for that of English, but to encourage the acquirement and exhibition of the earlier elements of science by means of the vernaculars, rather than by means of the English language. The functions of the new university were understood to be three:—viz., Examination, Literary encouragement and supervision, Tuition by Professors. The first function could be exercised more easily and thoroughly by a university at Lahore than at Dehli. For the former city was not only more central than the latter, but from being the seat of Government and of the Chief Court afforded facilities for the construction and working of an executive Committee. But, on the other hand, as to the literary function Dehli was far better adapted for the establishment and operations of a Literary Committee. The mother city of the Urdu language, in which that tongue is still spoken and written with far greater purity than in any city in Hindustan, would naturally, for many years to come, produce a very great proportion of such scholars as might be fit to devote the labour of their lives to the transfusion of European ideas and civilization into the vernacular. Moreover a Literary Committee at Lahore, which must practically consist of residents, would be likely to encourage the production

" of works, which oriental scholars would reject for impurity of language or ungracefulness of style. But it was to the third function, that of teaching, that the most serious objections were to be raised if the *locale* of the university were to be Lahore. It was proposed that the university should take up tuition where the colleges left it. But the students of Dehli would never consent to complete their education by a residence of some years at Lahore, and as the highest order of instruction would not be imparted in the Dehli College, the best material to be found in Hindustan for the required purpose would be thrown away. Thus with the men at Dehli and the instruction at Lahore, with, so to speak, the stock in one place and the graft in another, what fruit could be expected or rather what tree?"

" In the opinion of the Dehli Society if the university were to be at Lahore, its literary and teaching functions should be abandoned, the funds being generally appropriated to improve the existing educational institution. But it should be remembered that a university at Dehli could immediately exercise its examining and literary functions for the Panjáb and North-West Provinces conjoined, and might hereafter exercise a teaching (professorial) function, neither of which objects would be attained at Lahore."

The scheme of the Panjáb Government as it was first presented to the Government of India, was based upon one put forth in a memorandum by Mr. Aitchison before these final discussions in the Anjumans of Dehli and Lahore had taken place. Mr. Aitchison's minute is a landmark, and owing to its importance will be quoted here *verbatim* with the omission of details. He wrote as follows:—" In any discussion of the question of the diffusion of European literature and science through the medium of the vernacular languages of India, it would be wrong to start with any other assumption than that the vernaculars of the country do not as yet afford the materials for conveying instruction of a high order. Not only do scientific works not exist in any number, even in translation, but the vernacular language, by which, for Upper India, I must be understood as meaning Urdu, is in its present imperfect state incapable of correctly expressing the results of European science, far less the processes and methods of European thought. For many years to come a knowledge of English will be indispensable to any native of India who is desirous of prosecuting high literary and scientific studies. The number of those, therefore, who can hope to be imbued with the spirit of European thought must necessarily be few, and found chiefly among the wealthier classes of native society. But even if they were far more numerous than we can expect them to be, they must, unless the vernacular language be itself enriched



“and largely developed, for ever remain as widely separated in thought and knowledge from the masses of their countrymen as are the English themselves in India.

“Nor must we conceal from ourselves that the knowledge of English obtainable in Upper India, and I fear that the same may be said of India generally, except, perhaps, in the presidency towns, is practically useless as a means of conveying even to the students any adequate knowledge of European literature and science. The defects of the system which has been thrust upon us by the Calcutta University are so obvious, and so universally admitted in this part of the country, as to require no discussion. Not only do the English students universally display all the faults usually attaching to a superficial English education, but I think it beyond dispute that, with rare exceptions, they will be found to have little or no command over their mother tongue.”

Mr. Aitchison then referred to the refusal of the Calcutta University to modify their course, a decision which he thought was not to be regretted. He continued : “The general idea seems to be that a university should be established at Delhi for the North-West Provinces, and Panjáb combined. If there be only one university for both Provinces, Delhi is no doubt the best place for it. But now that the idea of a separation from Calcutta has been started, I should hope to see the North-West Provinces and the Panjáb have each their own university, the latter at Lahore. The extent of country to be provided for, the peculiarities of the Panjáb in the dialects, habits, and customs of its population, the existence of a valuable museum and Medical College at Lahore, and the earnest efforts that have of late years been made for the establishment of an Oriental University there, entitle the people of the Panjáb to consideration.

“But whether there is one university or two, I hope we shall avoid the error of modelling the University after that of Calcutta, and constituting it a mere examining body.

“The main object of a university is not so much to test what students know as to guide them in their studies and train them in proper methods of learning. None of our present colleges answer the proper purposes of a university ; and instead of merely examining students as to the results of their college reading, we should take them up where our colleges leave them, and by subjecting them then to the personal influence of elevated enthusiastic scientific men at the time when their minds are most plastic, infuse into them something of the Western love of learning for its own sake, and guide them in the true method of gratifying it. A university that shall be a mere examining body is under the most favourable circumstances an anomaly, and is quite unsuited to the requirements of this country where

"scientific method in study is almost unknown. I hope, therefore we shall have a university modelled rather after those of Scotland and Germany than after that of London; a university at which, if actual residence and study be not by rule compulsory, they shall at least in practice be found expedient from the rigid exaction of qualifications for a degree, which can be acquired only exceptionally out of the university."

Mr. Aitchison then sketches a plan of a superior University College with an Entrance standard which should require considerable attainments in Arabic or Sanskrit. There would be scholars, Professors, and Fellows of whom some should be bound to study in a European university. For degrees three subjects should be studied, of which either Arabic or Sanskrit and English should be compulsory, and the third subject optional. The Fellows who had studied in Europe should, on their return to India, be attached to the University, teaching and communicating the result of their study in Urdu and not in English. "It is of course impossible," he added, "to create or enrich a language by direct effort, but we can do it by enriching thought, which will of necessity find for itself expression; no mere translation will ever do this." The chief objection to a scheme of this kind, Mr. Aitchison thought, was its costliness. The expenditure would be about Rs. 1,20,000 a year, but he thought that sum might be raised. Liberal donations had already been received, and more were expected. Besides the whole expenditure now incurred on the Lahore College would also be available, as the college would be absorbed in the university, leaving to the Mission College the conduct of preliminary studies at Lahore. They might count, too, upon the sympathies and support of Sir Robert Montgomery, Sir H. Edwards and others who had left the country, but whose hearts were still in India.

A general meeting of those interested in the promotion of the objects of the university was held at Lahore in the Lawrence Hall on 12th March 1868, under the presidency of Sir Donald Macleod. The following resolutions were passed after discussion:—

(1) That a University should be proposed exclusively for the Panjāb.

(2) That it should be at Lahore

(3) That it should be a teaching body as well as an examining body.

(4) That the governing body consist of a Chancellor (the Lieutenant-Governor), a Vice-Chancellor, a Council of Senate.

(5) That the university take up the teaching of the students from the point at which the Government colleges leave it off.

(6) That the instruction in the university be on the professional system.

At an adjourned meeting two additional resolutions were passed :—

(1) That education be conveyed, as far as possible, through the medium of the vernacular.

(2) That while the highest honors of the University be reserved for those who attain the highest form of education, which it is admitted can only at present be attained by those possessing a thorough knowledge of English, the University shall also recognise and honour literary merit and learning in the case of those unacquainted with the English language.

Again on the 25th May a very numerous attended meeting was held to discuss the draft of a letter by the Secretary to Government proposing the establishment of a university at Lahore in terms based on the resolutions of previous meetings. Sir Donald Macleod was again in the chair. The letter was approved of, but it was desired that inasmuch as the funds at the disposal of the university would not at present suffice to defray the cost of a collegiate department the Senate should be empowered to expend funds in increasing the resources of the existing Government colleges, provided that their system was modified so as to harmonise with the principles of the university. Another clause was to be added directing that provision be made for duly recognising and honouring proficiency in English though uncombined with proficiency in Arabic or Sanskrit.

The letter of the Panjáb Government bears date May the 27th. Excepting that the proposed Chancellor afterwards became a President, and that certificates were substituted for degrees, it contains almost word for word the Statutes which were granted to the Lahore University College. The reply of the Government of India to the proposal of the Panjáb Government is dated 19th September 1868, and the decision then arrived at was communicated in the following terms :—

“ It is evident from the papers submitted with your letter that the establishment of a university as an examining body in the first instance has been proposed on the grounds of economy alone; and if the primary object of the proposal be to establish a teaching body, the Governor-General in Council is prepared to comply with the application made by the Panjáb Government. Such a body would be called, according to the nomenclature commonly adopted in England and in India, a college and not a university. There seems to be in the Panjáb an almost inexhaustible supply of material which requires to be taught, but at present a very small supply of material requiring to be examined. While, therefore, His Excellency in Council admits the propriety of establishing a teaching institution at Lahore, he is inclined to think that there is nothing

"in the circumstances of the province to justify the establishment of a university simply for the examination of students." After observing that at the last examination of the Calcutta University only four students of the Panjáb colleges had passed the First Arts standard, that the scheme amounted to a proposal that the Panjáb Educational Department should test the success of its own labours, and that such an institution would have a better chance of success in the North-West Provinces, the despatch proceeds: "His Excellency in Council believes that the demand for a university in Northern India must before long be admitted . . . . . A new university for the whole of Northern India including the North-Western Provinces, the Panjáb, Oudh and the Urdu and Hindee speaking districts of the Central Provinces. The difficulty of finding a thoroughly competent body of independent examiners will be great. But this difficulty is one which it is reasonable to believe will go on constantly diminishing and will in course of time be entirely surmounted.

"As regards the pecuniary aid which is applied for in your letter under acknowledgment, His Excellency in Council is quite willing to sanction a grant-in-aid equivalent to the annual income of Rs. 21,000 expected from private sources, but with the condition that, instead of expending the funds in establishing a university or examining body, they shall be expended on the extension and improvement of the existing Lahore Government College on the principles advocated by the Panjáb Government. The addition of Rs. 42,000 a year to the sum now allowed to that college would be sufficient to make it one of the most important Educational Institutions in India, and it would give to the Panjáb Government the means of carrying out its views as fully—indeed more fully—than it could do if the proposals were sanctioned in their present form.

"I am at the same time directed to inform the Lieutenant-Governor that the Government of India will be ready to sanction the establishment of a new university for the whole of Northern India in accordance with the principles now advocated, and to request that His Honour will place himself in communication with the Lieutenant-Governor of the North-Western Provinces, and endeavour to mature a plan which shall meet the wants of both provinces."

This decision was received in the Panjáb with profound disappointment, and Sir Donald Macleod strenuously contested the arguments of the Government of India, pointing out the insuperable obstacles which, in his opinion, stood in the way of establishing a joint university for Northern India, both on account of the mutual jealousies of Lahore, Dehli, and the North-Western Provinces, and because the whole question of directing the education of

a province appeared to him to appertain essentially to the government of that province. To this remonstrance the Government of India replied in May 1869. In the meantime Lord Lawrence had made way for Lord Mayo, and either because of the change in the Government, or because of the engrossing interest of the Amir of Kábul's visit, or from utter weariness of the discussion, the tone of the present communication is altogether different. In fact the Government of India all but threw up the game, yet stopped short at some half-hearted concessions which have proved to be a source of embarrassment ever since. The final sanction of a University college was conveyed in the following terms :—

"It must be admitted that the degrees conferred by the Panjáb University, were it now established, must almost necessarily be of an inferior character, but it was understood that the Lieutenant-Governor was willing that the proposed institution should not for the present assume the full character of an university, and that it should not grant degrees, but certificates only, until the number of students and the power of teaching in any branch of study or in any faculty, could be shown to be sufficient to warrant the conferring of an university degree. . . . . It would, perhaps, be a convenient arrangement to attach the Senate to the Lahore College and to give the entire institution some such title as that of "University College, Lahore," which would mark the fact that the present arrangement was merely temporary and was intended only as preliminary to the possible establishment, at some future time, of an university in the Panjáb.

"The connection of the Senate with the Lahore College need not militate against either the continuance of the connection of that institution, or of that of any other college in the Panjáb with the Calcutta University; and students who may enter themselves at the latter university might still be allowed to pursue their studies at any of the affiliated institutions in the Panjáb."

The enthusiasts at Lahore were not satisfied, and Mr. Lepel Griffin, now President of the Anjuman-i-Panjáb in place of Dr. Leitner, who was in England, on behalf of that Society, put forth an eloquent though unavailing declaration of the views and aims of the promoters of the university.

Sir Donald Macleod in reply stated that his personal sympathies were entirely with the members of the Anjuman, but he considered it undesirable and disrespectful to make a further remonstrance. He had lately availed himself of an opportunity of discussing the matter with the Viceroy and other Members of Council, and could not fail to see that there was an entire unwillingness on the part of the Government generally to identify itself so entirely with a project wholly new, and as yet quite untried, as to raise to the highest dignity amongst educational institutions a body

which was to be constituted on principles greatly differing from those which had heretofore been accepted.

Accordingly, after sanction of the Secretary of State had been received, the Statutes of Lahore University College (afterwards the Panjáb University College) were published, and about 40 of the most considerable persons in the Panjáb, Native and European, were appointed to the Senate. At the risk of repetition it will be convenient to give here the chief provisions of the statutes :—

I.—The special object of the Lahore University College shall be to promote the diffusion of European science through the vernacular languages of the Panjáb, to encourage the enlightened study of Eastern classical literature, and to associate the learned and influential classes with the officers of Government in the promotion and supervision of popular education.

II.—Nomination of members of Senate.

III.—The Senate shall have power to confer, after examination, certificates of proficiency in literature and science, to establish fellowships and scholarships, to reward good vernacular translations, or original treatises, to establish a collegiate department, or to make pecuniary grants to other colleges. .

Examinations and instructions should, as far as possible, be in vernacular, provided that in institutions affiliated to the Calcutta University students should be allowed to prepare themselves for its examinations. Superficial scholarship should be discouraged by a modification of the existing system of prescribing text-books, and by substituting largely oral examination, composition, and translation; and by diminishing the number of obligatory subjects. Proficiency in Arabic or Sanskrit, or such other oriental language as might be prescribed by the Senate, combined with a thorough acquaintance with English, should be a necessary condition for obtaining the highest honours of the institution; but provision should be made for recognising and honouring proficiency in literature and science without English, or proficiency in English unaccompanied by a knowledge of Arabic or Sanskrit.

On the 11th January 1870, Sir Donald Macleod as President opened the Institution with an address to the Senate. He congratulated his audience and himself upon the arrival of the day, to which they had so long looked forward anxiously and hopefully, and recapitulated briefly the successive steps by which matters had arrived at their present position. He said that he had long regarded with regret the meagre results which had hitherto been attained towards the formation of a vernacular literature; and accordingly, shortly after assuming charge of his present post, he had caused a letter to be addressed to the Director of Public Instruction, urging him to devote his earnest attention to the matter. His suggestions were immediately taken up with great keenness

and intelligence by the literary societies at Lahore and Amritsar, who under the guidance of Dr. Leitner greatly enlarged upon them, and proposed that an "Oriental University" should be founded at Lahore. The term "Oriental" did not commend itself to Sir Donald Macleod's judgment, but he had been induced to advocate the establishment of a university, partly because of the inability of the University of Calcutta to meet the requirements of Upper India, but more especially to secure an object which he had long had at heart, *viz.*, the association of the leaders of the people in the endeavours of the Government to promote the progress of education.

After the address the Senate proceeded to business. The chief matters taken in hand were the nomination of an executive committee, and the appointment of Dr. Leitner as Registrar, who was declared by Mr. Lepel Griffin to be clearly entitled to it as having been "the creator of the whole project, to which he had unemittingly given his time and attention."

From this time it will be convenient to sketch the history of the University College in more general terms.

Dr. Leitner returned from Europe shortly afterwards, and devoted himself with amazing industry to accomplish the objects of the institution, and to qualify it for the full powers of a university. Under his guidance the Executive Committee of the Senate often prolonged their sittings through the hours which weary officials devote to their evening drive and later—"no fear, lest dinner cool"—like Adam in Paradise.

During the year seven general meetings of the Senate were held. An oriental school was started, in which Pandits, Maulvies, and Munshies were instructed in their own subjects, and in general knowledge, examiners were appointed, scholarships were assigned to the Government colleges whereby the number of students was largely increased, law classes were formed, the Lahore Medical school was affiliated, and endeavours were made to bring the whole of the operations of Government in the department of Literature, Science and Art, and the examination of officers in law or languages, under the control of the Senate. This activity was never relaxed so long as Dr. Leitner remained at Lahore. In October 1871, the first examinations were held upon the new principle; and in the next month, at a public meeting held for the distribution of prizes and certificates, the Lieutenant-Governor announced that he would recommend the Government of India to allow to the University College the power of conferring degrees. For this purpose he appointed a committee of gentlemen, who with a very few exceptions were members of the Senate and all of whom were specially qualified to deal with the subjects under consideration. The committee held daily meetings in

December 1871, and finally submitted a report, which, after further discussion, was accepted by the Senate "subject to their presumed power to amend the scheme after experience of its working."

After a long delay the Supreme Government declined to grant the full powers of a university to the institution in the Panjáb, but the scheme of the Select Committee was not therefore laid aside, but has again been brought forward as the one by means of which the Senate may exercise its privilege of holding examinations and granting certificates.

The scheme contains provisions for holding examinations in Arts, Medicine, Law, and Engineering. With an exception in favour of the examinations in Medicine it is open to the obvious and fatal objection that it does not correspond to any course of study which actually exists, but is simply an indication of the standard to which in the opinion of the authors the students of the Panjáb University should in future be trained. There are at present no schools in the Panjáb in which engineering is taught. Admission to the law classes is almost unrestricted, and they do not yet deserve to be recognised by affiliation to a university. The scheme of the medical faculty carries out the plan of the existing medical school, conferring oriental titles upon students in vernacular who may master the *Baid* or *Yunani* systems of India.

The examinations in arts are, however, in some respects the most important part of the scheme. The general principle upon which they are based is the requirement of much higher proficiency than in the examinations of the Calcutta University, but a smaller number of compulsory subjects. For the B. A. examination only two subjects are required, of which English must be one. Whatever may be the theoretical value of this principle which represents the practice of Oxford and Cambridge, as opposed to that of London and the Scotch Universities, it is unsuited to the constitution of the existing Indian colleges, where from the poverty of the means of instruction it is far more easy to secure a moderate degree of excellence in the subjects required by the Calcutta University, than to attain to high proficiency in a more limited number. It is, of course, possible to provide teaching of a high order in one or two subjects, but properly to carry out the proposed scheme it would be necessary to appoint half a dozen professors on salaries which would secure the services of first-class men. This was foreseen by Mr. Aitchison, but the present proposal deals with the limited resources now available. Even if the money were forthcoming, it may be doubted whether it would be wise to spend a much larger sum than at present upon such students as might be collected in a college at Lahore.

It may be worth while to point out one defect in the proposed



**Arts' scheme**—to shew that these examinations could never be held in practice, as they do not owe their origin to the familiar experience of the lecture room, but were elaborated in the study from an abstract point of view, and then hurried through the committee.

In accordance with the principles declared in the Statutes, examination in text-books is prohibited. Nevertheless, as the impossibility of obtaining anything like a complete acquaintance with literature or philosophy must be recognised, the university "recommends the following course of reading as an indication of the standard to which candidates will be expected to have attained." Then follows a list of books something like that prescribed by the Calcutta University only rather more extensive. One can understand an examination in the English language, or in English literature, but the study of the *Merchant of Venice* will contribute only very remotely to the answering of questions on *Macbeth*, and a perfect knowledge of Wordsworth's *Excursion* will not much assist the interpretation of Swinburne's *Songs before Sunrise*. It is true that for the admission to the Civil Service young men are examined in the whole of English literature, and the Classical Tripos examination at Cambridge is not confined to text-books. But there is no analogy between these cases and the scheme of the Panjáb University. The successful competition-wala will have read cursorily most of the plays of Shakspeare, and has a thorough knowledge of the most important of each class. The Cambridge man who takes honours in classics has been familiar with his subject for at least a dozen years, and will fare ill if more than half the passages selected are new to him. But in the Panjáb University scheme a list of books is given not much exceeding those prescribed for Pass Examinations in the English Universities, and the knowledge of a whole literature is supposed to be the result!

An exception, however, should be made in favour of philosophy. Here the course of reading indicated is certainly wide enough, though one may doubt whether a young man's time would be profitably spent in going through it. The authors "indicated" are Locke, Berkeley, Hume, Reid, Hamilton, Cousin, Mackintosh, Butler, Stewart, Mansel, Thomson, Fowler, Spalding. But enough of this. The scheme is a purely visionary one, and it is hardly fair to criticise it as one which had been adopted in sober earnest by men who knew the students who were to be examined. Let us try by placing ourselves on the level of facts to form an opinion as to the possibility of accomplishing the ends which were proposed by the founders of the Panjáb University movement.

There are in the Panjáb four classes of students who may come within the scope of a university, and who may be assumed to be fit objects for its operations.

(1)—The students of the Anglo-Vernacular schools and colleges who must be dealt with on some such system as that which the Calcutta University has hitherto pursued.

(2)—Students of Government Vernacular schools who have hitherto had little connection with higher education, but who may be encouraged to study the oriental classics while acquiring a sound though limited education in subjects of general knowledge.

(3)—Students of Medicine, Engineering and Law, for whom a suitable course may be prescribed either in English or Vernacular.

(4)—Pandits and Maulvies who have considerable familiarity with their sacred books, but no attainments in the subjects taught in Government schools.

Such persons may be found in sufficient numbers, provided that gratuitous instruction and subsistence allowances are supplied. Additional funds would be required, but existing institutions afford at least a foundation. The weak point in a university for the Panjáb is, and alway must be, the difficulty of obtaining experienced examiners and a competent Senate. At Lahore is the seat of Government, the Law Courts, and a Medical School; but some of the most influential official members of Senate are for six months away at Murree, and for most of the rest of the year in camp with the Lieutenant-Governor. The native members of Senate, who, after all are the *raison d'être* of the Panjáb University, are with very few exceptions wholly inexperienced in the ideas of the European university system.

Lahore itself is famous in the history of politics, but is in no sense a seat of learning; while Dehli is less able than Lahore to contribute the elements of a governing body. Indeed, no single town in Northern India is strong enough to furnish the constituents of a university; and the only way to accomplish the object in view is to collect the material which is dispersed over the country lying between Benares and the Indus. University Colleges and councils may continue to exist at Lahore, Allahabad or elsewhere; but the supreme governing body of a University in Northern India should be composed of competent persons from all parts of the Northern Provinces. Their meetings might be held once a year at Simla, or, if it were thought more suitable, at Dehli. They must be for the present at least mainly European officials, for the Senate should include none but those who have gained Honours in some University, or whose attainments are known to entitle them to speak with authority on the matters which would come up for discussion. A prejudice in favour of private enterprise often leads in this country to a sacrifice of force which can only be applied by the State. Official members of Senate should be considered on duty, and the examiners selected by them should in the same way receive their instructions from Govern-

ment. They would require no pay besides their ordinary salary and travelling allowance, being sufficiently remunerated by the honour conferred upon them. Surely the service is sufficiently important for Government to bestow this, the most effectual aid in its power.

But the object of this paper has been rather to trace the history of the Panjáb University College, than to suggest a means of escape from the present deadlock. Something, however, must be done if the work commenced with a fair promise of success, is not to become fruitless. The present Viceroy who was in part author of the Despatch of 1854 is specially qualified to lay the foundation of the fourth university, and he is not likely to allow his term of office to expire without settling a question which seems now to call for his intervention.

C. PEARSON.

## ART. VI.—THE TERRITORIAL ARISTOCRACY OF BENGAL.

### NO. VI.—THE KA'NDI FAMILY.

THE Kánda family, commonly known as Lálá Bábu's family, has been always distinguished for its adherence to the Hindu religion and for its charity. The devotions of its scions to pious work will be abundantly testified in the course of this narrative. In Bengal the Kayasthas as a class of people occupy by far the most prominent rank next to that of the Bráhmans. Originally they came from Kanauj with the five Bráhmans who had been invited by Adiswara, King of Gaur. As their descendants became numerous, they scattered themselves into different parts of the Province. Those settling in the North were called *Uttaráris*, those on the South *Dakshináris*, those on the East *Bungojas*, and so forth. When King Ballál Sen classified the Bráhmans according to their respective merits, or in other words introduced Kulinism, he made a similar division for the Kayasthas also. It will hence appear that the geographical distinction of the *Uttaráris* proved no bar to their being included in the list made by him, but that they are as much governed by his rules as their masters the Bráhmans, and as other Kayasthas. Some *Uttaráris* of the present time deny this fact, and in their ignorance of the social history of the country assert that they are above the Balláli system. But when we remember that their Jibdhar and Provákar and Mani and Mallik stood high in the general classification, and their descendants still take the same rank, we cannot but conclude that their assertions are groundless and fallacious.

The Kánda family belongs to the *Uttarári* class of Kayasthas, and has its origin from Jibdhar named above. It thus stands one of the highest in the order of Kulinism as in opulence; and this union of the two in the same family is seldom to be found in the annals of the aristocracy of the land.

Little is known of the early history of this family; the traditional accounts are so obscure, that it will not be worth while to mention them here. It is, however, beyond dispute that Hara Krishna Singh was the first who settled at Kánda, and may thus be called founder of the family. He began his career as a money-lender, and afterwards opened an extensive business in silk. During the Marhátta incursions he migrated to Boália on the east side of the river Bhágíráthí. Possessed of much wealth, he obtained this village along with others by presenting *nazaráná* to the Nawáb of Murshídábád. Boáliá still forms a part of the vast

estate of the Kánda family. Hara Krishna Singh was not only a firm believer in Vaishnavism, but became a convert to it with his whole family, a fact which Rázi Kátáyáni, whom we shall speak of in the course of this narrative, used to relate often with pride.

Muráldhar was the son of Hara Krishna Singh. He was a banker and the father of three sons, namely, Náráyan Singh, Gauráing Singh, and Bihári Singh. We are told that Gauráing Singh Mazumdár, being expert in business became a servant of the Kánungo Mahásay, or Bangádhicary; and amassed wealth, acquiring mahals, táluks, and lákhiráj lands. In the twelfth year of the reign of Sháh Alam, 1178, he is said to have obtained a sanad of perpetuity at Kánda from the Emperor of Delhi, for the purpose of endowing the shrine of Thákur Rádháballabha Jí; but the chronology is evidently incorrect.

Gauráing Singh made a brick-built house at Kánda with cornices after the fashion of Siráj-ud-Daulah's residence. This circumstance so exasperated the haughty Nawáb that he immediately ordered the cornices to be pulled down and the builder to be arrested. This mark of vandalism is visible in some parts of the dilapidated house which still exists. His brother, Bihári Singh, appears to have had four sons:—Dáindayál, Rádhá Kánta, Rádhá Charan, and Gangágovind. Gauráing Singh having no heir adopted his nephew, Rádhá Kánta, as his son; and he and his brother, Gangágovind, were the most important of the four brothers, and those of whom most is known. Rádhá Kánta succeeded his father in his employment, and acquired wealth also, it is said, by his "own energy." Mr. Westland gives the information that "he was a high revenue officer under Alivardi Khán and Suraj-ud-Dowla, Nawabs of Bengal, and when the British obtained the Dewany of the Soobas Bengal, Behar and Orissa, from the emperor, he rendered great service by placing at their disposal the necessary settlement and collection papers, for which he was rewarded by the grant of a sayer mahal and right of collecting octroi at Hugli."

He was an orthodox and devoted Hindu, and appears to have greatly enriched the shrines at Kánda. He purchased the villages of Buhara, &c., in 1168; and in 1178 executed a deed by which he dedicated them with four other villages, and other property to the worship of Srí Srí Isvar Rádháballabha Jí at Kánda—causing them to be transferred into his name and also providing for the reception of visitors, pilgrims and Vaishnavas, the annual festivals and játrás and ornaments of the idol. He was in every respect one of the most remarkable men of the time. His capacity for business was marvellous, as his memory was prodigious. It is said he could repeat by heart what he had once seen without

referring to papers ; and had all the business of the revenue at his fingers' ends. He did not, however, remain long in the Nizāmat before he was suspected of intriguing with the British. Sirāj-ud-Daulah was then in the zenith of his power, and he was mad to revenge himself upon Rādhā Kānta. A long time before, Rājā Durlabhram had taken a liking for Rādhā Kānta for his high abilities, and he it was who informed him of what was going on at the Darbār for his ruin. By the advice of his friend, Rādhā Kānta fled to Nuddea, where a conspiracy was then being concocted against the Nawāb. At a full assembly held at the house of Rājā Krishna Chandra, and in presence of the emissaries of Lord Clive, Rādhā Kānta vividly described the state of the feelings of the officers of the Nawāb. He said they were sick of him, and longing for a change. He went so far as to assure the conspirators that Mīrjāfar had already made up his mind, and Mohanlāl, the General, might be bought over if an attempt to that effect were made. The emissaries then left for Chandernagar where Clive had his head-quarters. The events of the battle of Plassey showed how true and faithful was the information supplied by Rādhā Kānta at the risk of his life. When Mīrjāfar was installed on the throne, Rādhā Kānta was appointed by Clive to manage all the affairs of the Revenue Department along with Muhammad Reza Khān and Rājā Durlabhram.

Rādhā Charan was a weak-minded person and not much liked either by his father or his brothers. He appears to have remained at home, while Rādhā Kānta used to be generally absent attending to the official duties. Gangāgovind was likewise an absentee from home, being employed as joint Divān, with Kānta Bābu, of Warren Hastings. During the Muhammadan administration there were three officers who held employment direct from the Emperor of Delhi, viz., the Nawāb as the head of the Government, the Kānungo the head of the *Jamā* or revenue department, and the Rāyrayān the head of the criminal affairs. All these offices were hereditary ; and the revenue Sheristā was presided over by the predecessors of the Bhattamattī family, as that of police by Mahārājā Rājballabha and his ancestors. Gangāgovind, like his brother, Rādhā Kānta, was the Divān or Kānungo, when the question of the abolition of the double government was on the tapis. While an employé in the Silk Factory of the East India Company at Kāsimbāzār, Mr. Hastings had had an opportunity not only of making himself acquainted with Gangāgovind, but also of hearing his uncommon tact, ability, and judgment in matters connected with revenue. When, therefore, he became the Governor-General he at once took Gangāgovind into confidence and made him his public Divān ; and Kānta Bābu, who had saved his life during the sacking of the factory by Sirāj-ud-Daulah, his private Divan.

This account may be relied upon from the circumstance of the one being more completely versed in business and better educated than the other. The probability becomes stronger, when we consider that Kánta Bábu does not figure so prominently in the annals of that period as his contemporary Gangágovind.

While Kánta Bábu performed the out-door work, Gangágovind Singh, being a Persian scholar and well acquainted with zamíndáfi affairs, conducted the business of the Sheristá, and advised Mr. Hastings as to the best way of effecting the changes contemplated by him in the judicial and revenue departments. The object of those changes was the abolition of the double government, and to secure to the East India Company the nominal as well as the real administration. It was the deposition of the puppet Viceroy at Murshidábád, and the establishment of properly constituted courts of justice. The new assessment of zamíndaris and táluks of Bengal for the purposes of revenue was conducted by Mr. Hastings, a task in which he derived valuable assistance from the experience and fiscal knowledge of Gangágovind Singh.

Mr. Hastings afterwards abolished the provincial Councils and appointed Gangágovind Singh as Diván of the Committee of the revenue. He was also appointed Náyéb Kánungo; and his son, Prán Krishna Singh, Náyéb Diván of the Committee. Thus we see the members of the Kándi family holding the highest offices in the State, and exercising immense influence by virtue of their position. All zamíndárs, tálukdárs, and in fact all those who held lands in any part of the country used to pay their respects to Gangágovind. Raja Krishna Chandra of Nuddea always looked upon him as a second Mr. Hastings; and it was invariably his motto in addressing him

দরবার অসাধ্য পুত্র আরাধ্য

কেবল ভরসা গঙ্গাগোবিন্দ

meaning

No success at Court, no obedience in son,  
My hope is only in Gangágovind.

Gangágovind Singh enjoyed the entire confidence of Mr. Hastings, and used to be entrusted with delicate missions requiring great tact and judgment. He was sent to Dinájpur to administer the zamíndári during the minority of the young Rájá. This youth was the adopted son of the late Rájá who, in consideration of the English Government having recognised and confirmed the adoption, had promised to pay to it a *nazar* of three lákhs (laksha) of rupees—which in those days of impecuniosity he was too glad to accept on behalf of his masters. For carrying out the instructions of Mr. Hastings, Mr. Burke in the trial of Hastings exhausts the vocabulary of abuse in speaking of him. Mr. Burke entered

into a minute detail of the peculations in Dinájpur, from whose Rájá £30,000 had been extorted. He touched upon the bribes received by Gangágovind Singh, and by Mr. Hastings' "agent, Kánta Bábu." The former was by contract to have raised a large sum in another district, but did not pay above one-half of it: so that between two different agents who were to have raised £90,000, only £50,000 were acknowledged to be paid into the Company's treasury. The remaining £40,000 found its ways into the pockets either of Mr. Hastings or of his agents.

Gangágovind Singh was also charged with having received from Kánárám four lakhs of rupees for the benefit of Mr. Hastings. In spite of his connection with the proceedings of Mr. Hastings, he obtained the good opinion and enjoyed the confidence of his successor, Lord Cornwallis, who appointed him *Jamánavis*. In the latter capacity he assisted Lord Cornwallis in effecting the Permanent Settlement. His extensive knowledge and ripe judgment enabled him to render invaluable assistance to Lord Cornwallis. His intimate acquaintance with the qualities of the land and resources of zamíndáris were of great service in fixing the assessment. As *Jamánavis* he is said to have submitted to the Ráyráyan Rájá Rájballabha on the month of June 1786, a jamá wásíl báki of the Company's land revenue of Bengal, Behár and Orissa (Uríshyá) for the years 1188, 1189, 1190, and 1191, Bengal style; but this is probably a mistake. As is said above, the Ráyráyan had nothing to do with fiscal matters. On Mr. Hasting's installation in the office of Governor-General, he took Rájballabha to his Council; and it might be, Gangágovind submitted the paper to him as a member of such Council, and not as Ráyráyan.

It appears from that document, the gross *jamá* according to the settlement, was Rs. 1,11,801,408-11-3; and that the collections in the respective years amounted to Rs. 1,00,926,411-8-10.

Gangágovind Singh was zealous in promoting the Hindu religion and celebrating its worship. He performed the *śrāddha* or the funeral ceremony of his mother with immense pomp.\* There were

\* Gangágovind was never fond of sinking money in bricks and mortar for his own habitation; and an assembly, such as he had invited, could not be accommodated in any house, however spacious it might be. He had, therefore, to erect a temporary shed on a *maidān* outside his dwelling. The Rájás of Nadiyá and Nátor being Bráhmans had the first seats; then came those of the Rájás of Bardwán and Dinájpur, and next there were the Rájá of Jessor and the *Mahásayas* of Pátuli,

and so on, according to the rank and position of every guest. Rájá Krishna Chandra was laid up at the time, and was unable to stir out. He therefore desired his eldest son, Siva Chandra, to proceed to Kánda on the occasion. On his refusing to do so, the Rájá pointed out to him the power and influence of Gangágovind with the rulers of the country; and went so far as to say, that of all men in Bengal, Gangágovind was the only person whose friendship and good-will he was ever solicitous to secure at



not only Pandits from Kási and Káncbí, Tirhut (Tirhoot) and Nadiyá, but every Chatuspáthí was represented. There were the Rájás of Nadiyá and Nátor, Bardhamán (Burdwan) and Dinájpur. There were zamíndárs from all parts of Bengal anxious to pay their homage to the Divánjí who had assessed and settled their estates.

There were Bháts, or herald-minstrels, who repeated in their own sing-song way the genealogy of the Rájá. There were thousands and tens of thousands of invited guests. There were provided unlimited stores of provisions. There were tanks of milk, *ghí*, oil \* and honey. There were hills of rice and dál and peas. The *sidhás* sent to the invited guests included an enormous quantity of rice and vegetables and *ghí* and other materials for a feast. When the guests were assembled, the Rájás congratulated Gangágovind Singh on the splendour of this *sráddha*. The *sráddha* cost twenty lakhs of rupees, and its annual celebration used to cost a lakh.

Gangágovind Singh also encouraged the Pandits of Nadiyá ; contributing largely to their support and that of their students, repairing their houses and providing them with food and clothing. The necessary articles were said to have been transmitted by him to every *tol* on the first of each month. He built temples at Rámchandrapur, on the very spot near Nadiyá where Gauránga (Uháitanyá) is said to have been born, for the worship of Srí Govind, Gopináth, Krishna Ji, and Madan Mohan Ji. We

any cost. Siva Chandra was convinced of the truth of his father's reasoning, and went at last with a vast retinue. On his arrival an immense quantity of provisions was sent to him for his *sidhá*, which he distributed among beggars and mendicants. Another quantity was sent and it was for the second time so distributed. The object of Siva Chandra in thus squandering away what was meant for his use, was to test the contents of the store which his host had provided on the occasion. For the third time one more *sidhá* was given, and an idea of its quantity may be formed when it is known that the turmeric alone consisted of four cart-loads. Siva Chandra was astonished at this, and is said to have declared in full assembly "Divánjí! What a ceremony is this! It is really a Dakshayajua." "It is more than that," replied Gangágovind, "for at that Yajna

Siva did not attend." It will thus appear that it was Siva Chandra and not any other guests who refused to accept the *sidhá*.

Besides the *sráddha* of his mother, Gangágovind performed two more ceremonies with a pomp, the like of which has never been witnessed in Bengal. One was the Annaprásana of his grandson, Lálá Bábu, in which invitation cards to Pandits were engraved on gold leaves, and the other the *Páran* or the chanting of the sacred Puránas at his house in Belur. Gadádhara Siromani of Sonámukhí, Bardwán, the father of chanting, is said to have made his *début* on that occasion, and Gangágovind was so much pleased with his eloquence and musical powers, that he rewarded him with a lump sum of one lakh of rupees.

\* The tank in which oil was stored up, is still existing and goes by the name of *Telgoria*.

find him on 1st Agrahāyana, 1199 B. S., making over certain lands, houses, &c., which had been bought in the name of Prān Krishna Singh, but (it is carefully stated) from self-acquired funds and "without using the patrimony," to the "dearer than life," Krishna Chandra Singh (his grandson). The deed thus runs :  
 • "Being very desirous to establish the worship of Śrī Śrī Isvar at Rāmchandrapur, and you having afforded me great assistance in the construction of temples, &c., therefore, being well pleased with you, &c."

Gangāgovind Singh used also to incur considerable expense for the support of pilgrims to the shrine at Sāgar, who received from him boat-hire, food, clothing, &c. ; and he established places for relief of mendicants at Belur and elsewhere.

In this way and in many other acts of charity he spent all the money he had acquired ; and on the retirement of Mr. Hastings he became so much reduced in circumstance that he could not complete the Thākur Rādhāballabha's house at Kāudī, and was often obliged to call upon his son, Prān Krishna, for even small assistance.

In 1179, two days previous to his death, Rādhā Kānta Singh executed a deed, appointing Rādhācharan and Gangāgovind to act as *sabants* in all matters relating to the worship of Śrī Rādhāballabha and management of the property devised by him for that purpose, concluding with the following words : "I look to you for my attaining to the holy mansion, and request you will have my bones placed where Śrī Śrī Isvar Jī bathes." Rādhā Kānta being childless, adopted Prānkrishna Singh, the son of his brother Gangāgovind as his heir. Prānkrishna therefore represented the main portion of the family wealth, the only other sharer in which was Bijaygovind, son of Rādhācharan. Rādhācharan continued to superintend the household affairs until his death at Changi, about five years after that of Rādhākānta ; when his funeral ceremony were performed by Divān Gangāgovind Singh, Prānkrishna and Bijaygovind being present. Bijaygovind remained at Kāndi studying Persian, and Prānkrishna was taken by Gangāgovind, his father, to Calcutta. Some differences as to their shares of the property seem to have arisen between Bijaygovind and the rest of the family, for an arrangement was entered into between him and Prānkrishna Singh on 1st Maugh 1212, by which several villages and a portion of the family dwelling house were made over to him. Again on 27th Aughrān 1226, a further arrangement was effected, by which he obtained from Krishnachandra Singh, Krishnachandrapur in Belur near Uttarapārā and other landed property yielding an annual profit of 8,000, and 16,000 Rupees in cash. Bijaygovind had an elder brother Rāmānanda, of whom nothing is known.

Mr. Hastings now appointed a commission for the purpose of ascertaining the resources of zamíndáris and letting them by public auction. The scheme was well intended, and its object was the settlement of the revenues. Gangágovind Singh was placed at the head of the commission. He was vested with the power of examining the titles and accounts of zamíndárs and making estimates acre by acre, a power the abuse of which might bring enormous wealth. It was called an Amíní Commission; and Gangágovind Singh was the head Amín. While he brought his vast experience to bear upon the investigation, he did not scruple to make it an engine for his personal aggrandisement.

Gangágovind Singh was appointed by Mr. Hastings as the guardian of the young Rájá of Dinájpur, and under the instructions of His Excellency, he exacted from the Dinájpur ráj a *peshkash* of four lakhs of rupees of which he said to have pocketed the half. His confidential agents were Govind Ghosh and Nanda Lál. Gangágovind Singh also claimed from Mr. Hastings a large portion of the Dinájpur ráj as a reward for his services. Mr. Hastings supported the claim, and strongly recommended it to the Council. The young Rájá had also at first given his sanction to the application, but afterwards withdrew it. Gangágovind denied the right of the Rájá to these estates, and contended that all property in this country depended upon the will of the Government. He also shewed that the Rájá's family came into possession of the zamíndárá by the mere favour of Government. But this reasoning did not go down with the Council.

Mr. Burke charges Mr. Hastings with destroying the institutions of the country, by not appointing a Diván as a controlling authority on the farmers, but by delegating the power of appointing that officer to Gangágovind Singh.—“Did Mr. Hastings vest these officers to him? No; but if Mr. Hastings had kept firm to the duties which the Act of Parliament appointed him to execute, all the revenue appointments must have been made by him; but instead of making them himself he appointed Gangágovind Singh to make them; and for that appointment, and for the whole train of subordinate villany which followed the placing iniquity in the chief seat of Government, Mr. Hastings is answerable. He is answerable, I say, first for destroying his own legal capacity; and next for destroying the legal capacity of the Council, not one of whom ever had, or could have any true knowledge of the state of the country from the moment he buried it in the gulf of mystery and of darkness under that collected heap of villany, Gangágovind Singh. From that moment he destroyed the power of government, and put every thing into his hands; for this he is answerable.”

In strong contrast to these hostile expressions of Mr. Burke, Mr. Hastings, the best abused man of his time, thus bears his personal testimony to the merits of Gangágovind Singh, on the occasion of his departure from India :—"The regret which I cannot but feel in relinquishing the service of my Honorable employers would be much embittered were it accompanied by the reflection that I have neglected the merits of a man who deserves no less of them than of myself—Gangágovind Singh who, from his earliest youth, has been employed in the collection of the revenues, and was, about eleven years ago, selected for his superior talent to fill the office of Diván to the Calcutta Committee. He has from that time, with a short intermission, been the principal native agent in the collection of the Company's revenues ; and I can take upon myself to say that he has performed the duties of his office with fidelity, diligence, and ability. To myself he has given proofs of a constancy and attachment, which neither the fears nor expectations excited by the prevalence of direct influence could shake ; and at a time, too, when these qualities were so dangerous, that far from finding them amongst the generality of his countrymen, I did not invariably meet with them amongst my own. With such a sense of his merits, it is natural that I should feel a desire of rewarding him ; for justice, gratitude, generosity, and even policy demand it : and I resort to the Board for the means of performing so necessary a duty, in full confidence that, as those things which I shall point out are neither incompatible with the Company's interest nor prejudicial to the rights of others, they will not be withheld from me. At the request, therefore, of Gangágovind Singh, I deliver the accompanying *darkásts* or petitions, for grants of lauds lying in different districts ; the total jamá or rent of which amounts to Rs, 2,38,061-12-1."

In the Regulation 27 of 1793, re-enacting with alterations and modifications, the rules for the resumption and abolition of the *sáyer* or internal duties and taxes, the following certificate is awarded to Rádhágovind Singh or rather as he ought to have been named Rádhá Kánta Singh, entitling him as the proprietor of Govindaganj to a certain amount of collections from the said *gunj*.

"The case of the proprietor of Govindaganj being of a special nature, the following certificate is to be granted to him :—"

"This is to certify that Rádhágovinda Singh having proved his right as required by the 10th Article of the Regulations of the Governor-General in Council of the 11th June 1790, to compensation account, the *sáyer* collections formerly made by him in the *gunj* denominated Govindaganj in the district of Nadíyá, now Hooghly (*Hugli*), but since prohibited by Government he is agreeably to the orders of the Governor-General in Council of the

3rd February 1792, entitled to receive, on this account, in equal quarterly proportions from the Collector of the district above mentioned \* the sum of Rs. 3,467-1-17-3, being the amount of his remaining rate annual collections from the hát or gunj aforesaid, after deducting the sum of Rs. 100 the revenue of Government; this payment to commence from the period of the above gunj having been resumed in conformity to the orders of Government of the 11th June above mentioned, provided\* no part thereof has yet been received. It is to be understood, that the payment of this compensation by the Collector in the manner aforesaid, is to continue no longer than until it shall please the Governor-General in Council to determine on any other mode of making the same."

Pránkrishna Singh, the son of Gangágovind, while he was Náyeab Diván, felt it his duty to indict Gholám A'shraf, Rám Chandra Singh, and Gopí Názir for conspiracy.\* The particulars of the case are briefly these:—In 1782 Gholám A'shraf, who had acted as vakil of the Fauzdár of Hijlí, was arrested for having obtained certain sums of money from the Company's treasury through the instrumentality of Fauzdári dákhilás or receipts forged in the name of Nawáb Muzaffar Jang. The Nawáb presided over the Fauzdári or Criminal Courts, and these dákhilás were the drafts which are purported to have been given by him to the several officers of those courts for the amount of their salaries and disbursements.

The enquiry into these charges against Gholám A'shraf was entrusted to Mr. Willes, the then Remembrancer of the Criminal Courts. Gholám A'shraf to screen himself, accused Pránkrishna Singh of a participation in his guilt. Mr. Willes examined with great care and diligence all the circumstances of the charge, and after an investigation which had employed him above a month, submitted his report to the Board. In this he confirms the suspicions against Gholám A'shraf, and entirely acquits Pránkrishna Singh. Gholám A'shraf was, on this report, committed to take his trial at the Sessions. While a prisoner he preferred a petition to the Governor-General, not only adhering to the charges he had made against Pránkrishna Singh, but also accusing his father, Gangágovind Singh. "To investigate the whole subject a Special Commission consisting of Messrs. Charles Wilkins, James Grant, Jonathan Duncan, and John White, was constituted by the Board. These gentlemen opened their commission on the 12th day of April, having been first sworn to the faithful execution of it. Their proceedings display great ability and uncommon

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\* This grant being made in perpetuity is still enjoyed by his descendants. "

diligence. They followed Gholám A'shraf through all his charges, and carefully examined every witness and every record to which either his suggestions or their own recollection pointed in support of them. Finding, however, that all the evidence which had been adduced to maintain the charges invariably disproved them, they told Gholám A'shraf on the 23rd May that they would allow him fifteen days more for the production of other witnesses, and that if he did not then substantiate his charges, they should report their proceedings to the Board."

"On the 7th June Gholam A'shraf produced three witnesses, but after a short examination they were found to have been all suborned for the purpose. The Commissioners reported this discovery to the Board. The Board laid it before Sir John Day, the Advocate-General, and he advised that the witnesses and their accomplices should be prosecuted. Two of them were accordingly brought to trial at that Session, and one was convicted. The Commissioners continued their enquiry, and in August made their Report to the Board fully acquitting the Diván and his son of all the charges which had been alleged against them."

When the false witnesses were detected at Chitpur, the Diván and his son were confirmed in a belief which they had before entertained, that Gholám A'shraf, in all the charges he had brought against them, was an instrument only in the hands of others; and under this conviction, Pránkrishna seems to have preferred the present indictment against Rámchandra Sen and Gopí Názir. Pránkrishna preferred an indictment against Rámchandra Sen and Gopí Názir for conspiring with the aid of Gholám A'shraf to deprive him of his reputation, his official position, and to obtain the forfeiture of his goods. The trial commenced on the 21st December 1785, and occupied the court 40 days. The verdict of the Jury was as follows :—" We find Gopí Názir not guilty in either count. We find Rám Chandra Sen guilty of combining with Gholám A'shraf to prepare and deliver a Persian *árzi* as stated in the third count."

Of Pránkrishna comparatively little further is known, except that he was in the employ of Government in the Settlement Office of Azimábád, and added very largely to the family estates, purchasing three-fourth of Parganá Bagowan and the whole of Naldi in 1801 from the Board of Revenue. Pránkrishna also purchased lot Sríhati and lot Jobi in Bírblúm. He is reputed to have also been devoted to his religious duties, and to have maintained the worship at the various shrines with care.

His son, Krishua Chandra Singh, (commonly known through Upper India as Lálá Bábu) distinguished himself by extreme devotion to religion. He was employed in the post (important in those days) of Sheristádár in the Magistrate, Collector and Judge's offices,

at Bardwán; when he commenced work he was only 17. Subsequently, when possession was taken of Orissa, he was appointed there as Diván in charge of the Settlement. He was there in 1803. He bought property, Parganá Rahun, Sire, and Chabiskud there in 1816, of which he had some difficulty in getting possession; but he declined to settle for the Government revenue assessed on it in 1820—since which time the estate receives *malikānā*. He is said to have celebrated the *śrāddha* of his father with much splendour. He purchased Parganá Anúpshahr, partly in Aligarh, but chiefly in Bulandshahr.

Krishna Chandra Singh was in every respect an extraordinary man. He began his boyhood with that intense devotion to learning which he afterwards turned so signally to religion. With the means at his command he engaged the most eminent teachers to teach him Arabic and Persian, as well as Sanskrit. He was considered one of the best Persian scholars of his time, and his knowledge of Sanskrit was so far respectable that he could understand and paraphrase the most difficult passages of *Srīmad Bhāgbata*, which he had got almost byheart. He is also said to have paid much attention to caligraphy, for he could write with remarkable neatness and freedom. Some misunderstanding, however, with his father, diverted his mind from study; and at the age of seventeen, he accepted the Divánship of the Collectorate of Bardwán. Though very young, he soon evinced an aptitude for business and a knowledge of rules and regulations such as might be expected only from a man of talent and intelligence. He had not been long in that situation ere he was looked upon by the Government as the fittest person to be entrusted with the work of settlement of Orissa. While in Bardwán he purchased the zamíndarí of lot Bisálakshmípur in that district.

After his return from Orissa, he resided chiefly in Calcutta, managing his property and studying the Puránas; for which purpose he always kept by him a set of men learned in the Sástras. Except with the Singh families of Sobhábazár and Jorásánko, he never mixed freely with the society of Calcutta, some of the leaders of which he hated for the laxity of their morals. Personally he had no great regard for Rájá Rájkrishna; but he entertained great veneration for the mother of that nobleman, who also invariably treated him as her son, and used to send him presents on every festive occasion as tokens of her affection. It is said that Rájkrishna abstained from a certain mode of life he was then pursuing—under the moral influence of Krishna Chandra, who looked upon him as his brother.

Krishna Chandra was an ascetic by nature. The most remarkable feature in his character was self-abnegation. He had all that can make a man proud of himself and of his position—rank, wealth,

learning to boot. But in the midst of all these, he looked to his Maker, and to him alone, for his happiness in life. He had made it a rule from which he never deviated, to devote five hours daily to worship and the telling of his beads. He lived solely upon vegetable food ; and that simply dressed. He had a notion that rich food excites the animal passions ; and he therefore avoided it. He proceeded to Brindában in the prime of his age, and it was in that holy shrine that he made his life remarkable both by acts of charity and by extraordinary devotion. Before, however, he left home, he made every arrangement for the education of his son and the control and guidance of his household. Bábu Nilmani Bose of Chorebagan, Calcutta, was appointed general agent to conduct all law-suits, as well as to manage all zamíndári affairs. He took with him the enormous sum of 25 lakhs of rupees ; and took for his residence a large mansion built by the Mahárájá of Bharatpur. It was was not then known who he was, or for what purpose he had come. But the fame of his charity soon spread abroad ; and even excited the cupidity of thieves and dákáits of whom there were great numbers in the neighbourhood. His house was plundered ; and money to the amount of about three lákhs was carried away.

About this time (1227 Jait) Krishna Chandra directed his attention to the primary objects of his visit to the Upper Provinces. One was to build a magnificent temple, and the other to retire finally from the concerns of this world, and to lead the life of a hermit. For the materials of the building he applied to one of the chiefs of Rájasthán, who having heard of the purpose for which they were required, gladly allowed him, free of charge, as much stone and marble as he could carry away from his territory. Arrangements were accordingly made for the transport of the materials to Brindában ; in which also the Ráná assisted him. It so happened that the Ráná then fell out with the British Government in respect of a treaty which he had been called upon to sign ; and the vacillation which he showed on the occasion was made a subject of inquiry. Sir Charles (then Mr.) Metcalfe was at the time resident at the Court of Delhi with plenary powers, as Commissioner, to deal with all offences against the British Government. It was insinuated to him that the Ráná would have put his name to the treaty, had it not been for the intrigues of one Krishna Chandra Singh, *alias* Lálá Bábu, a native of Bengal, his Diván. Mr. Metcalfe without ascertaining as to how far this report was current, at once issued an order for the arrest of Krishna Chandra upon a charge of State conspiracy. When this order reached the Magistrate of Mathurá, people of all classes began to ask each other, how was it possible that a man so pious, so religious, and so benevolent could be implicated in a crime so great.



"No doubt," said they, "it is the act of some malicious persons who have poisoned the Commissioner's ears against him. We will follow him to Dehli, and see what becomes of him." They did so, and no less than about ten thousand persons—among whom many were Mewátis, Játs and Gujars—escorted Lálá Bábu to Dehli with the firm determination to die in his cause if any thing adverse should happen to him. The escort gained strength as it proceeded, and the crowd swelled to double its original numbers. Dehli and its neighbourhood were not then as they are now. Mr. Metcalfe was alarmed at the multitude that thronged the streets of the city, and he could not easily account for the popularity of the alleged culprit. He therefore thought it prudent to make private enquiries at first as to the character and antecedents of Lálá Bábu, and subsequently, if necessary, to bring him to trial. Mr. Metcalfe had for his Persian writer a Bengáli named Debíprasád Ráy of Sántipur in Nadiyá. It was through this man, as well as from other sources, he learnt all about Lálá Bábu, his family, and his and their faithful services to Government; and when he became fully satisfied of his innocence, he called him to his presence, and made him be seated on a sofa. Lálá Bábu spoke in a dignified tone, such as befitted a soul pure as his, and a heart never capable of any offence whatever against any individual, much less against the East India Company whose salt he had eaten. He narrated at length all that had passed between him and the Ráná, and the wholesome advice he had tendered to him to gain the good-will of the Company Báhádur. As to the allegation of his being the Diván of that chief, he said that he had had enough of the services of human beings, and the only employment he would now seek for would be to do his duty to his God. On the next day Mr. Metcalfe took Lálá Bábu to the Court of the Emperor, where, at a full Darbár, he introduced him to His Majesty, as one who with his ancestors had performed important services to the Company Báhádur, in posts of the highest responsibility. At the request of the Resident, the Emperor, who was then the fountain of honour, offered Lálá Bábu the title of Mahárájá which he, however, politely declined to accept.

"About a month after, Lálá Bábu returned from Dehli amidst the loud cries, "*Jáy Lálá Babu ka jáy*," of the inhabitants of Brajadham. During his stay there he purchased from the family of Rájá Sher Singh that extensive and compact zamíndári, Perganá Anúpshahr. He also purchased in the district of Mathurá almost all the villages which are famous for their being the seat where the great *Avatár* Krishna held his gambols and dalliances, as are narrated in the sacred Puránas.

The temple of Lálá Bábu is by far the highest of any that are to

be seen at any of the holy places in the North Western Provinces. It has one minaret ; and is built much after the style of the temple of Jagannáth in Putí. It is therefore not so beautiful to look at as the brick-built temple at Báusbaria near Hugli, erected by Nrisingha Deb Ráy Maháshay, for the goddess Hansasori ; but the Nátmándir or anti-temple is an elegant and noble edifice, and it displays an architectural skill which might do honour to an Italian architect. The Thákur Krishna Chandrimá Jí stands like a statue upon a marble pedestal inside the principal temple ; and is the best engraved idol in all Brindában.

Having erected the temples, and endowed them with large estates, Lálá Bábu now thought of abdicating his worldly career, and thereby fulfilling his last and dearly-cherished object. Of all places in the district of Mathurá, Govardhan is a shrine which is regarded by the followers of Vaishnavism as the holiest. Umbrageous with the luxuriant foliage of ním and other trees, and secluded by the hills bearing its name, it is well calculated for the direction of the mind to the contemplation of the Deity. Lálá Bábu repaired to that spot. He had long heard of the fame of Krishnadás Bábájí as a true and devoted Vaishnava ; and out of many yogí living at the time in Govardhan, he selected him for his guide to the mysteries of that faith \* Lálá Bábu thus became a yogí ; and this circumstance created so deep an impression on the minds of the people of Upper India, that he was canonised as a saint. It is said that he never associated with, or talked to a worldly person after he had assumed the yogí's garb. An anecdote is related of him in respect of the intended visit to him by Parekjí. He sent to that celebrated banker to say that "if he would come with the dress of a Sunyásí, he would be welcome, otherwise not." The fact was that Parekjí had also a mind to retire from business and to become a Vaishnava ; but when asked by Lálá Bábu to follow him he demurred and fell back. He found, perhaps, that wealth was sweeter to him than the life of an ascetic. Lálá Bábu had likewise refused to receive the Mahá Rání of Gwáliár, when she came to Govardhan. She, however, insisted upon making her obeisance to so pious a man ; and he on attempting to, fly from her, was trodden upon

\* A gentleman connected with the family thus writes of Krishna Dás :—"In 1861, I had an opportunity of visiting that venerable old man. He was then giving lessons to his disciples, and though 101 summers had rolled over his head, yet he seemed to retain all the vigour of his great and elastic mind. He received me courteously ; and knowing that

I was a Bráhmañ, made a profound bow to me. Never in my life did I behold a countenance so deep in piety, so bland in meekness, and so calm and composed in philosophical sentiments, as his. He gave a graphic account of Lálá Bábu, the accident that caused his death. Krishna Dás died at the age of 103."—S.K.L.

by one of her horses—which deplorable accident was the cause of his death. It was deeply regretted by the Rání; and she mourned for it all the days of her life.

The name “Lálá Bábu” was given to Krishna Chandra by his grandfather, Gangágovind. It is an endearing title, commonly used in addressing the Kayasthas of respectability in the Upper Provinces.

Srínáráyan Singh was left a minor when his father Lálá Bábu, died. The management of the estate during his minority was vested in his mother, Rání Kátyáyani. The Board, however, finding the property too extensive for a zaná ná lady to manage properly, took it under its direct supervision; and appointed Bábu Bhagabán Bose, a near relative of the Ráy Chaudhri family of Takí, as manager; leaving the Rání to act as guardian to the minor. Srínáráyan purchased Bhulúá in Tipperah. The price paid for it was three lakhs. The money not being forthcoming at the time, it was borrowed from Bábu Raghu Goswámí of Srírámpore, through his favourite officer Rámchánd Láhiri. Bhulúá is now the largest and most valuable estate in the possession of the family.

Four annas of the estate had belonged to Gangágovind Singh. The remaining twelve annas, having been put up to sale for arrears of revenue, was purchased by Srínáráyan Rishi for the sum of Rs. 2,38,000. But the sale was cancelled by the Commissioner. The property, however, was again put up to sale by Mr. Halliday, then Collector of Noakháli, and purchased by Srínáráyan in the name of Dwárákanáth Tagore, his friend. Srínáráyan was a huge mass of flesh; he was therefore incapable of performing any thing requiring bodily exertion. Notwithstanding the strict injunctions of his father, his education was much neglected, and he was left to do what he liked best. He directed his attention to the study of music, vocal and instrumental, which he was very fond of; and very soon became a proficient in that art. He had only a superficial knowledge of Persian; but he could speak Hindustáni and Urdu with a grace and elegance which might do credit to an accomplished Muhammadan of Dehli or Lucknow. In his time the orchestra attached to the idol's house at Kándi was considered the sweetest in the country, even surpassing those in the Nizámat. Srínáráyan used to celebrate the annual Rash ceremony of the idol with much pomp; and gave in charity on every such occasion large sums of money. He died quite young, and not without a suspicion of having been carried off by poison.

Rání Kátyáyani purchased, or rather took in liquidation of the sum of three lakhs of rupees due to her by Dwárákanáth Tagore, the lot Jogadísipur in Hugli. Potatoes as well as sugarcane are

grown on this estate. She also purchased ten annas' share of Parganá Amarálád in Noakhálí from the Mukarji family of Bág-bázár in Calcutta.

The Rání expended 16 lakhs in charities. She celebrated at the family house, at Belur near the E. I. Railway Station of Bálí, the ceremony of Anna Meru or Mountain of Rice. There were immense mounds of rice, and ponds of ghi for the entertainment of the visitors. Pectuniary presents were made to the Pandits of the celebrated Samájas as well as to other Bráhmans. The ceremony cost 50,000 rupees.

Srínaráyan married three wives, of whom the second died in his life-time, leaving two daughters. He died, giving his wives permission to adopt according to the provisions of the Hindu Law. The elder wife adopted Pratápchandra Singh, and the younger Iswarchandra Singh. But by virtue of Srínaráyan's will, his mother, Rání Kátyáyani, continued to manage the property. Some time after the adopted sons had arrived at their majority, on the recommendation of Mr. Bushby, the then Secretary to the Government of India, the Rání consented to give up the management in favour of her adopted grandsons. Pratáp Chandra Singh proved a worthy representative of this distinguished family. His career was a career of benevolence. The Fever Hospital which has proved such an inestimable boon to the sick poor of the metropolis, is a striking evidence of his munificence. He contributed Rs. 50,000 towards the erection of the hospital; and Lord Dalhousie, who laid its foundation stone, was so much pleased with his gift, that he alluded to it in most laudatory terms on that occasion. For this and other benefactions His Lordship conferred on him the title of Rájá Báhádur. The sanad is dated the 20th April 1854, and is couched in flattering terms in the Persian language.

The investiture was held at Government House, when the late Mahárájá of Páttialá and many others of high rank were present.

Educational and other institutions, having the good of the country for their object, received the countenance and support of Rájá Pratáp Chandra Singh. He established a school at Kāndi in 1859. It is entirely supported by the Kāndi family, and is a well-conducted institution. There is a fine library in connection with the school. It is largely used by the masters and the advanced pupils. Besides the Kāndi school, there were several other schools and Pátsáls which he supported. There was, in truth, scarcely any educational institution in the metropolis requiring his aid which did not receive it. Of female education the Rájá was a strenuous and bold advocate. He strenuously supported the female schools established in his time by Pandit Iswar Chandra Vidyáságar. He not only advocated the public education of Hindu females, but supported the zauáná system, as suitable under certain special

circumstances. He employed a governess in his own family, and used to devote three hours every day to giving lessons to his daughters. He was a warm supporter of the widow marriage movement, and contributed munificently to the furtherance of it.

For the revival of the Hindu Drama in Bengal his exertions were unflagging. The Belgáchia Theatre was established by him, and his accomplished brother, Iswar Chandra Singh. It proved a great success, and largely contributed to the improvement and extension of the drama in this country.

The public associations and institutions of the metropolis received his active co-operation. He was the Vice-President of the British Indian Association, Agricultural Society, Vernacular Literature Society, Bethune Society, Dalhousie Institute, District Charitable Society, &c. It was, however, with the British Indian Association that the name of Rájá Pratáp Chandra Singh will be inseparably connected. He was one of the founders of the Association, and it was at his mansion that the inaugural meetings were held. He was appointed the senior Vice-President of the Association in 1861, and subscribed three thousand rupees per annum to its funds. This was irrespective of his donations to other objects in connection with the Association. As a Vice-President and Member of the Committee, he evinced a lively interest in their deliberations. When the Flogging Bill was under consideration, Rájá Pratáp Chandra Singh remarked that he regretted very much that the measure had been again revived in the Legislative Council. "Not six months ago this Association took occasion to protest against its policy, and to point out its injurious tendencies; and when the clauses relating to it were omitted from the Penal Code, he for one thought that this attempt at retrograde legislation would not again be resorted to. He would therefore urge the Association to represent to the legislature in the same spirit the prejudicial effects which the enactment of the measure under notice would produce upon the people. He accordingly moved:—

That this meeting considering the revival of punishment by flogging to be extremely demoralising in its tendency, and consequently incompatible with sound principles of penal jurisprudence, resolves, that a petition, expressive of the above sentiments, be addressed to the Legislative Council, relative to the Bill prescribing corporal punishment in certain cases."

A great public meeting to petition for the extension of the criminal jurisdiction of the Mofussil courts was held in the town of Calcutta on Monday, April 6th, 1857. "The resolution asserted a principle of vital importance to the character and influence of National Law—that of perfect equality as respects the individual offender, equality as respects penalties, and equality as respects the forms of administration and the nature of tribunals."

There was scarcely a movement for a public object initiated in the metropolis or in the metropolitan districts which did not receive his countenance and support. Appeals from the mofussil for the establishment of schools, the construction of roads and the excavation of tanks were frequently made to him, and always with success.

The merits of such a man were fully appreciated and were rewarded by the Government. He was appointed one of the four native members of the Legislative Council of Bengal, on its formation. When Mr. James Wilson thought it necessary to impose the Income-tax, Sir John Peter Grant appointed him a member of the Income-tax Commission in order that his presence and counsel might smooth the operation of the impost. There was scarcely a committee of a mixed character of which he was not appointed a member by the Government. He was in truth, considered one of the representatives of his nation. In recognition of his merits, Her Majesty's Government conferred on him the Star of India; and it was also in contemplation to appoint him a member of the Imperial Council, but he was cut down in the prime of life.

Except Táluk Gopálpur in Midnapur, and bits and parcels here and there, most of the estates in Bengal have been let in *Patni*. The leases of the estates in *Patni*, commenced with Rájá Pratáp Chandra's adoptive father, Srináráyan Singh, in P erganá Bagaun in Nadiyá.

During the time of Rájá Pratáp Chandra a good deal of money was spent in litigation. Rádhá Krishna and Govind Rám, the largest bankers\* in the Upper Provinces, are the proprietors of the idol Parswanáth. Now, the Thákurbári of the idol adjoins that of the idols set up by Lálá Bábu at Brindában. During the mutiny the bankers had erected a mound before the two Thákurbáris for protection from the encroachment of the rebels, which they refuse to raze to the ground after the mutiny was stamped out. On this Rájá Pratáp Chandra sued them first in the Zillah Court, and then in the Sadar Court at Allahátád, which decreed the case to him. But the costs of the suit, a small portion of which he only received, amounted to a lakh of rupees. Another great case, brought by him against the Watsons, cost him a great deal of money.

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\* These two were the younger brothers of Lachhmí Chand Seth who got the hoarded wealth from Párají alluded to above. This Párají was the General of the army of Sindia. Having acquired immense sums of money, and falling out with the chief, he fled to British territories and settled in Mathurá; where, as well as in other places, he commenced a banking business on a most extensive scale. Being childless, he, on his death-bed, made over all his properties to Lachhmí Chand who was the son of a favourite *Gomashia*, Mougurám.

There are two large estates in the Upper Provinces belonging to the Kándí House, *viz.*, Anúpsahr in Bulandshahr, and Hatwá in Mathurá. The proceeds, aggregating four lakhs, are applied to the *Seba* of the idols established by Lálá Bábu.

Rájá Pratáp Chandra had faults. He was reserved and his manners were stiff. He had not the power of small talk. But he was all warmth within. He was once called by a friend, "a volcano capped in snow."

Neither were his charities, either public or private, stinted. An anecdote is related of him which shows how deeply his mind was imbued with the desire of redressing the distresses of other people. One day he had had to go to Titaghar near Barrackpore on a visit to a member of the Board of Revenue who was about to retire from the Service. On the way he had to stop for relay. A number of mendicants surrounded him and begged for something. He searched his pocket in vain, and was greatly vexed at his chaprási for not having put money there as usual. One of his principal officers, who was with him, remarked that these men might not be real beggars, to which he at once said, "that is a Young Bengal idea, what business have I to pry into their affairs?—they came to me in the garb of beggars and I took them as such." He then went to a shop-keeper close by, and actually borrowed five rupees which he distributed among the beggars!

The loss of such a man was regretted by all classes of his countrymen. At a general meeting of the British Indian Association, held on the 31st of July 1866, the Chairman moved the following resolution: "That this meeting desires to record its deep sense of regret at the untimely death of Rájá Pratáp Chandra Singh Báhádur, C.S.I., a Vice-President of the Association since its foundation, whose career has been marked by princely liberality and enlightened benevolence, by zealous exertions to promote the interest of this Association, and by entire devotion to the cause of Indian amelioration." The resolution was seconded by Bábu Digambar Mitra and was unanimously carried.

Bábu, now Rájá Jatindra Mohan Tagore, moved the next resolution which was as follows:—"That in commemoration of the valuable services rendered to this Association by the late Rájá Pratáp Chandra Singh Báhádur, C.S.I., a memorial in the form of a portrait be raised by means of subscription from among the members of the Association, and that the portrait be hung in the Hall of the Association."

Pratáp Chandra purchased six-annas share of Perganá Bábuspur in Noakháli and also the lot Kagash in Bírghúm, as well as Belgáchíá Villa from the trustees of Dwárkanáth.

We have alluded to the brother of Rájá Pratáp Chandra Singh in connection with the Belgáchíá Theatre, and have

called him accomplished. But Iswara Chandra Singh was more than accomplished. He was a high-minded and large-brained young man. He was singularly free from the prejudices of position or rank, and treated all men alike; his manners being polished and perfect. His conversation was rich and sparkling. He was one of Nature's noblemen; and those who knew him, best appreciated his guilelessness. He was a keen sportsman and was a warm patron of the Calcutta Turf. He used to contribute to the *Indian Field* in its sporting column under the Editorship of Mr. Hume. He was the Secretary to the British Indian Association for several years; and both his portrait and that of his brother now grace the hall of that body. He also died a premature death during the life-time of his brother.

One great act was done by Iswara Chandra for which he ought to have been thanked and rewarded by Government. When the mutinous spirit of the Bengal Army had spread to the solitary regiment at Chittagong, Pratáp Chandra was absent from Páikpára, and Iswara Chandra, therefore, took up the business of the Káchhári. When the news came to him, that the regiment had risen and was about to come down to Bhuluyá for the purpose of looting the Government Treasury there, he at once sent orders to his agent, Jasodá Kumár Páin, to collect all the able-bodied men in his zamindári arming them with guns and swords, and to save the treasury at any cost. He also instructed him to do every thing in accordance with the advice of the Collector, and to assist him by all means. The Bhuluyá Káchhári house being well walled, the treasury was removed to it, and the Collector thought of making it a garrison in case of a sudden attack of mutineers. The agent did all that he was ordered to do by Iswara Chandra. The mutineers, however, had heard all that was being done in Noákháli; and being conscious of their weakness in point of number they wavered and took a different route to join their brethren in other parts of the country. Thus Noákháli and the neighbouring districts were saved; Iswara Chandra's agent was presented with a watch by the Government, but no further notice was taken of his loyal conduct.

\*When the rumour of the Barrackpore mutineers being about to make an attempt upon Calcutta was in everybody's mouth, Iswara Chandra kept in his service for more than a month a large number of seamen with a view to guard the road as well as to protect his house at Páikpára. The late Mr. Dampier was then residing at Kásipur, and he and Iswara Chandra used to sit together every evening under a tree to witness the parade of the men. In fact, throughout this period, he as a loyal subject was all activity to allay the widespread panic both at home and abroad. The preparations he made on the occasion cost him more than eight thousand rupees.



## 116 *The Territorial Aristocracy of Bengal*

It is deeply to be regretted that in the untimely death of the Rájá and his amiable brother Iswara Chandra, the public have been deprived of the benefit of two grand projects which they had conceived and nearly matured. These were,—first, the opening of a branch railway from Sinthiyá to Kánda, a distance of about 22 miles; and, secondly, converting their extensive garden at Belgáchyá into a park. Their vast wealth as well as their noted liberality in all matters of public utility was a guarantee for the fulfilment of what they had in view.

The following is a list of the principal estates belonging to the Kánda family :—

Parganá Balluya		
„ Amirabad	}	Noákhálí.
„ Babúpur		
„ Naldi		... Jessor.
Taraf Tulsipur	...	Rájskhálí.
„ Shásan and other small lots	}	24-Parganá.
Parganá Bogaun	...	Nadiyá.
Lot Vishnulakshipur	...	Burdwan.
Táluk Gopálpur	...	Midnapur.
Lot Juyi	}	
„ Sríhati		
„ Dhaliyá		Birbhúm.
„ Kagash		
Taraf Sáktoriya and Sádipur	...	Burdwan.
Parganá Rádháballabhpur	}	Murshídábád.
Kijmat ditto		
Bhalagáchi	}	
Kásimpur		Dinájpur.
Amuagar	}	
Raghupore		
Rauniyá		Purneah.
Parganá Rahung	}	
„ Chabúkud		Cuttack.
„ Sire		
„ Anúpsah		Bulandshahr.
Taraf Alampur	...	Aligarh.
„ Nandarám Mathurá and about 13 other lots	}	Mathurá.

There are also many other estates in Farídpur, Rájskhálí, Máldah, Hugli, and Púri.

The total sadar jamá paid by the Kánda family is Rs. 4,75,413. The estate in Púri district yields a *malikáná* of Rs. 6,751.

Parganá Baluyá comprises an extensive tract of country, embracing the whole of Thánás Baluyá and Lakshmípura and

parts of Thánás Rámganj, Begamganj, Amírgaon, and Bámani, and also part of the island of Sandwípa. It has an area of 9,32,500 bighás or 310,833 acres. It is intersected by numerous rivers and *kháls*, which greatly facilitate intercommunication within the parganá. It is subject to inundations by the annual overflow of the Megna; as also by the sea, which does not apparently injure the crops. In the rainy season it is entirely submerged by water, and communication is kept up by means of boats of a peculiar construction called *kandá*.

The parganá is subdivided into numerous petty estates, chiefly let in *patni*. The soil is extremely rich in alluvial deposits, and the process of manuring is unknown. The cultivation of rice is the chief pursuit of the people; who are mostly Muhammadans of the agricultural class. The staple produce is rice of a coarse kind; and cocoanuts are largely grown. The early crop of rice is sown in Baisák and reaped in Srában; the latter crop is sown in Srában, and reaped in Kártik. The process of cultivation is extremely rude and simple. On the subsidence of the water, the ground is scratched by a thin iron, which serves as an apology for a plough; and the seed-grain is then scattered broadcast. Weeding is out of the question, for the land is soon after covered by water; and such is the luxuriance of the crop that it chokes any other growth. The rayat again returns in his boat when the crop is ripe, and only the ears of the corn are gathered in, leaving the straw to rot in the water and be converted into manure for future crops. The yield per bighá averages nine maunds; and the total outturn of the whole parganá is approximately estimated at 42,00,000 maunds. Part of the produce is exported to Calcutta and Chittagong. The coarser sorts in ordinary seasons fetch a price of Rs. 1-8, the finer Rs. 2. Next to rice, cocoanuts are produced in abundance, and are exported to Dacca and Calcutta. The ordinary indigenous pulses and oil-seeds are also cultivated on lands raised above the level of inundation, but the yield is barely sufficient for local consumption. There are no pastures anywhere within the parganá, owing to its annual submergence; and as a consequence the cattle are lean and poor.

Among local manufactures we may mention *chikní*, a kind of matting manufactured from reeds.

The chief *entrepôts* are Baluyá, Lakshmípurá, Bhavániganj, and Rámpur. A brisk inland trade is carried on with Dacca, Maimansíng, and Chittagong. The principal imports are mustard-oil and salt.

One-fourth of this large estate was purchased by Gangágo-vind Singh in 1208 B.E. But the whole parganá came into the hands of his successors in 1243. The history of its acquisition

is somewhat striking and worth preservation. As it was simply impossible to induce the many proprietors of the other three-fourths of the estate to sell their rights, Srikrishna Singh withheld the payment of the sadar jamá for the one-fourth of which he was master. Thus the whole estate was put up to auction and sold for a sum of Rs. 2,76,000. The nominal purchaser at the auction-sale was our renowned townsman, Bábu Dwárkanáth Tagore. The sadar jamá of this princely property is Rs. 1,49,202. The present estate of Baluyá includes 47 other minor estates of which Amirabad, Bábupur, Chár Fakíra, &c., are the principal. For these a further sum of Rs. 1,24,000 was paid as purchase-money.

Under the management of the present proprietors, 25 primary schools have sprung up within the parganá, the expenses of which are entirely defrayed by them. There are also five vernacular schools which receive aid from the Paikpára family. A night school for adult labouring men, a girls' school, and a school of carpentry, are also supported by them. There is a higher grade zillah school at Baluyá, under the direct management of Government. A dispensary has been established at the sadar station of Noákháli which receives a monthly grant of Rs. 50 from the zamíndár. For the improvement of the estate an embankment has been thrown up at a considerable expense at Nilu Khai to prevent the encroachment and inundation of the Megna. We understand there are other embankments erected entirely at the expense of the zamíndárs. As regards the antiquities of Baluyá, there is an ancient temple dedicated to Jaí Dúrgá and supported by a grant of land. The idol is carved out of black marble. It is the common belief of the people that when the goddess perspires it portends some dire evil impending the family of the zamíndárs, and it is said that the belief was verified in the untimely demise of the late Rájás Iswar Chandra and Pratáp Chandra Singh and their step-sister.

Parganá Naldi at one time formed part of the ancient Parganá of Bhúsná, which belonged to the celebrated Rání Bhavání of Nátor. It was purchased by Pránkrishna Singh at a sale for arrears of revenue in 1861, for a sum of Rs. 67,500. It comprises a large part of the subdivision of Narail and runs a good way into the subdivision of Magurá. It has an area of 725 square miles, or 4,84,582 acres. The present sadar jamá is Rs. 73,803. Rice and sugar are the staple produce of this parganá. The raw material for sugar comes mostly from Khájura and is exported to Nalchitti. The chief imports are salt, timber, cotton, ~~lime~~, betelnut and tobacco. The inhabitants are chiefly agricultural, with a sprinkling of petty traders and artisans. There are a number of primary schools scattered throughout the parganá

receiving from the proprietors a grant of 501 rupees. The school at Lakshmípur receives a grant of Rs. 60. The dispensary, which has proved a real boon to the sick poor during the late epidemic, receives a contribution of Rs. 120.

Since the management of the estate passed under the Court of Wards, a valuable addition has been made to the property of the Káñdi family. In 1871-72, Parganá Mohimsháhr was purchased for a sum of Rs. 3,64,500. It pays a sadar jamá of Rs. 17,204. It is an ancient parganá once owned by the famous Rání Bhaváni, it then passed into the hands of Madhusudan Sanyal of Farídpur. The parganá is comprised within the Thánás of Pangsá, Belgáchi, Bázárganj, Magurá, Fakírabad, and Kush-tiyá, which belong to the subdivisions of Magurá, Kushtiyá, and Goalandó. It has an area of 1,11,527 bighás; of which nearly the whole is under cultivation. It produces rice, and sugarcane which is converted into gúr; it contributes Rs. 157 towards the support of primary schools.

Here we may explain the connection of the Rossarah family with that of Káñdi. Krishna Chandra Singh, *alias* Láíá Bábu, espoused the daughter of Gaur Mohan Ghosh, the celebrated Rání Katyáyani. Her brother, Krishna Sundar Ghosh, had three sons, *viz.*, Gopi Mohan Ghosh, Hari Mohan Ghosh, and Rám Mohan Ghosh. On the demise of her son, Srináráyan, his two widows at the instance of Rání Katyáyani adopted Hari Mohan Ghosh and Rám Mohan Ghosh as their respective sons under the altered names of Pratáp Chandra Singh and Iswar Chandra Singh.

The following is an account of the Thákúrbári at Káñdi:—

“Of all the shrines, the one at Káñdi is maintained with the greatest liberality. The god here seems to live in the style of the great Moghul. His muşnud and pillows are of the best velvet and damask richly embroidered. Before him are placed gold and silver salvers, cups, tumblers, pawn dans, and guges all of various size and pattern. He is fed every day with fifty kinds of curries and two kinds of pudding. His breakfast over, gold hookas are brought to him to smoke the most aromatic tobacco. He then retires to his noon-day *siesta*. In the afternoon he tiffs and lunches, and at night sups upon the choicest and richest viands with new names in the vocabulary of Hindu confectionery. The daily expense at this shrine is said to be Rs. 500, inclusive of alms and charity to the poor. In Kandi the Ras *jatra* was at its height and illumination, fire-works, nautches, songs and frolic were the order of the day, and followed upon each other. The Ras mandala was a miniature of the Hindu Pantheon. It was interesting to see there the representatives of the principal characters of the Ramayana and Mohaburat, in well-executed life-sized figures. There was Ram breaking the bow

in the court of Jonaka. There was Arjoona trying his archery to carry off Dropoddie. The Rishis and Pundits of Judisthira's *subha* had very expressive features. The greatest attraction of all was possessed by the fine figures and faces of the Gopeerus. More than twenty-five thousand people were gathered at the *Mela*, and the sum of ten thousand rupees was expended by the Rajahs to celebrate the festival." This account is from *The Travels of a Hindu*, by Bhola Nath Chunder, p. 66.

After the death of Rájá Pratáp Chandra Singh in 1866, the estate passed under the Court of Wards. A European gentleman was appointed manager by the Court on a salary of Rs. 1,000 per mensem. The estate has continued to prosper under his management. With a view to clear off the debts and liabilities incurred during the life-time of the late Rájá, Shijamut in Midnapur was sold for Rs. 5,25,000; the estate is now free from all involvements and a valuable addition has been made to it by the purchase of Parganá Mohimshahr in the district of Farídpur, already mentioned. The elder Rájá left four sons, of whom all but the youngest have attained their majority. Rájá Iswar Chandra Singh has left an only son. Liberal arrangements have been made for their education, which is superintended by a distinguished European officer.

The town of Kedarpur from which the family takes its name, is situated in Tháná Bhartpur in the sub-division of Barhampur. There is a palatial residence belonging to the family, with temples, alms-houses, &c., attached to it. The family idols, Rádháballabh and Gobindjí, have at present an assignment of Rs. 12,000; besides a sum of Rs. 5,000, which is expended on the entertainment of guests and all comers. Formerly the expenses of the Thákúr were unlimited.

## ART. VII.—FAITH AND FATE.

**A**N indigo planter, a man well acquainted with natives and their ways of thinking, and of whose honesty and common sense I have the highest opinion, once told me a strange story. A ryot of his, a gowala if I remember aright, came to his factory one day to all appearance quite calm and self-possessed, but in a most unwonted hurry to settle his accounts, since, said he, he must die that night. His idea was that an old witch, a woman who owed him a grudge, had sent a 'bhoot sampa'—a ghost snake—to bite him; that, as it were in a dream, the night before he had seen this bhoot sampa approach and bite him; that he had immediately awakened, cold and clammy, with full knowledge of what had happened, and firm conviction that he must die. Here, observing my informant smile, as if incredulous, the man stretched out his hand, "see the marks of the bite," he said, showing two minute punctures on his finger, certainly very like those that would be left by a snake's bite.

Pretending to observe these more closely, my informant ran the pin of his chimtas sharply into the man's arm, who started back evidently hurt, while a drop or two of good red blood soon showed on the wound. His experience was appealed to as to whether such sensibility to pain or such good red blood would exist after the bite of a poisonous snake; he was reminded that, if haply not death, some ill effect of the venom must inevitably have followed such bite by that time—whereas he was, as hale and well as ever he had been in his life. He was laughed at, he was bullied, but nothing could shake his belief, and he went home and died that night about the time at which he supposed that the bhoot sampa had bitten him the night before. That his belief in the causes which led to his death seemed in nowise extraordinary to his caste fellows may be inferred from the fact that they took an early opportunity to make away with the old Dyne who was supposed to have caused the mischief. That the man was bitten by some harmless snake seems probable, and is so far material that the two punctures on his finger undoubtedly served to strengthen, and give consistency to, his preconceived (howsoever conceived) idea of the fate awaiting him. But of what did he die? Probably the doctors, in properly technical language of course, would say of fright. One can understand that easily enough; but I think one can understand too that in this instance fright would simply be an equivalent for 'faith.' Dare one say strong faith sublimated and become fate?

I have lived for some years in out-of-the-way mofussil places where, the spread of charitable dispensaries notwithstanding,

the people certainly do not take kindly to English medicines, and I have a notion that if a native, at first instance and not after every other help has been tried and failed, comes to a Saheb's bungalow for medicine, it matters very little what doctors' stuff, or what stuff not of the doctors, he gets as a remedy. It will do him good. I can only suppose he has faith in it—as evidenced by his rising superior to the prejudices of his class and coming for it—and that here again faith compels fate. Often has the camphor and chalk of my tooth powder, tempered may be with a little whitewash, scraped off the wall, proved as efficacious as quinine. Often have I found bread pills valuable curative agents in illnesses I knew nothing about. I was visiting at a friend's some two or three years ago, when an old fellow hobbled up with a long-winded complaint of a complication of diseases, which, as I did not understand them, I will not try to describe now. Suffice it to say that he thought himself very ill; and looked it. S. C. my friend was modest, and fain to tell the old fellow 'non possumus'; but thinking that that would be a pity, I went into the dining-room, emptied the fluids out of the cruet-stand, Worcester sauce, mustard, vinegar, and so on, into about a quarter of a bottle of stale beer; and shaking everything well together, told him to drink a tea-spoonful every morning as soon as he woke up, and another at sunset. Three weeks afterwards I heard that he was cured, and blessing S. C. and me. Now, certainly I do not know what may be the medicinal virtues of Worcester sauce, mustard, vinegar, and stale beer combined: perhaps therefore I wrongly ascribe this cure to faith. I think it was in 1869 that I began to have a glimmering of this connection between faith and fate. Cholera was very virulent round and about where I lived; and some pills obtained from the district dispensary proved to be so very successful as a cure, that at last the village folk got to believe in them as a panacea, and would beg a 'golee' for cases of fever, or rheumatism, or indeed, as it seemed, any illness with which they happened to be afflicted. The climax appeared to have been reached when a widow woman begged a pill to bring back the wits to her son who was an idiot; but a more notable example of faith was yet to arrive in the person of a gowalla who would have had me give one of the redoubtable pills for his cow, which had been bitten by a mad dog. Not being determined as to the value of such vicarious faith, and hesitating to endanger my reputation as a Hakím, I declined both suggestions. Was I wise, I wonder sometimes, now that such chances have gone past, and I, moss-grown milestone, have not got written on me all the information that might have been there to guide travellers?

I fancy I can conceive of faith so unswerving, so strong as a motive power, that it might well move mountains. The difficulty

to my thinking would be, not in moving the mountain, but in working up the requisite amount of faith. To educated men, prone to look to cause and effect, it would certainly be impossible ; to average conventionality, used in effect to believe that " whatever is, is best " still more so ; while to the crass ignorance with which alone such superstition seems compatible, it would certainly never occur to will to move mountains. And given the will even, such Titan emprise might well frighten, and so kill faith. Still, as an abstract possible, I incline to believe in a faith that can move mountains ; as more surely to the belief that, in less apparently impracticable undertakings, strong steadfast faith may, notably with the ignorant and credulous, and under certain conditions of which we know nothing, develop into fate. Surely such power of faith would be no more astonishing than some of these latter day triumphs of mind over matter ?—in the form of electricity for instance.

I am told it has been proved that an electric current can pass through the waters of a running river from bank to bank without any other connecting link than two zinc plates placed opposite each other, one on each bank. Who dare say that he *knows* how this is brought about ? People theorise, and guess, and grow to have faith in their thoughts ; but of such subtle occult sympathies as go to make up this motive power they cannot know. And who can tell what is the orbit, or what the limitation, of these sympathies ? Is there any precise reason to be given why faith should not be able, in some fashion inscrutable to us at this present, to coerce them to its purpose ? Can we say with absolute certainty that it did not do so in the old-world days of mysteries and miracles, when science was almost unknown, and sturdy ignorance, unblushing, unwitting of any other state, and so sublime in its confidence, dominated the crowd, and cowed thought ? Even in this our time of enlightenment and education, miracles are wrought by faith. Take the late appearances of the virgin in Alsace and Lorraine for instance. I certainly prefer to think that the simple peasant people do see, or fancy that they see, which amounts to exactly the same thing, those appearances they tell us of. I prefer this thinking to the alternative belief that a great many heretofore honest people have combined to establish a cruel cheat : and, pros and cons considered, it seems to me more reasonable so to think. Again, as to that vexed question of spiritualism ! It has grown into a business, a profession ; and that in the profession there are many liars, very many humbugs, outside of it very many dupes, I make no doubt. For that matter, it seems to me too ridiculous that spirits wishing to communicate with this earth should choose for their communications such media as chairs and tables. But I cannot think all believers in spiritualism either dishonest or dupes ; and must believe that some of them see and



experience, whatever it may be, through faith. Certainly spiritualism is no mighty development of faith : appearances of the virgin in Alsace, truly no great miracles ! but, in the way of miracles, they are probably as much as could be expected of the faint possible belief that is so much the fashion now-a-days. Read by the light of Prince Bismarck's fears, these Alsatian miracles at least seem to show that faith is not altogether contemptible as a motive power—that is to say, as, in more or less degree, pushing fate along, in the way that it wills.

JNO. HOOLEY.

## ART. VIII.—CHRONICLES OF SOUTHERN INDIA.

### PART I.—THE COAST OF 'LA PECHERIE.'

**E**NGLISHMEN are too apt to forget, or if they remember, to despise, the influence that has been exerted on the destinies of India by their European predecessors in this country.

The present plight of Pondicherry and Karikal and Chandernagore clouds the memories of the great nation from whom we hardly won India. Goa is a Nineveh of churches and colleges; a heart without a body; a capital without a country. Thus the territories of European nations in India are for the most part regarded by Englishmen as a blot on the symmetry of the map; an annoyance to the revenue official, and a thorn in the side of the custom house; of which the only present use is to shelter absconding debtors, and to serve as a depôt for cheap wines. It is most doubtful whether any man who has yet tried to write the history of the English settlements in India, has taken sufficient account of our European predecessors. The Portuguese and the Dutch were up and down the coast for centuries before the English name was a power in Southern India; and Jesuit missionaries counted their disciples by the thousand before the English trade with India was founded, and when not half-a-dozen Englishmen had visited Hindustan.

To know the history of the Jesuit missions of Southern India, is to have a glimpse of much of the infernal state of the surrounding country during more than three centuries. And those only who have tried to lift the darkness that shrouds those not far distant days, know how dense is that darkness, and how grateful is light that beams on it from any source. Nor is the record of these faithful exiles without an intrinsic merit that entitles it to general attention. The story of any men will find readers, that tells how lives were devoted, how brilliant talents were spent, and bitter trials and death itself endured, in the cause of the purest faith the world then knew, and to win souls from a darkness which seemed deadly, to life which was believed to be eternal. The names of Xavier, De Nobili, and Beschi throw lustre on all that records their deeds and words.

Xavier, the saintly enthusiast, who compassed the world in his ardour to win souls: whose zeal burned so fiercely that it was not in his power to sit him down and work calmly among a congregation, teaching and preaching like other men; but he must found a church and baptize a crowd, and pass on: leaving the vessel afloat, for others to guide, and the foundation laid on which humbler men tried to build.

Then came De Nobili, the high-born Italian gentleman, of stately presence and not less towering talents; who in his anchorite's cell became a Bráhmaṇ of a purer creed—the sannýási of Christ, and not of Siva; and who, in adopting the maxim of the first great missionary that he should 'be all things to all men,' stumbled over the obstacle of orthodoxy, and fell, through the jealous opposition of smaller men, who could not see the human wisdom of his adaptive faith. Again the torch was taken up, and handed on by the poet Beschí—the great Sanskritist, to whom the priestly lore of the Hindus was as familiar as his own missal, and who confounded both poet and grammarian by the fluency of his composition, and the scholarly accuracy of his style.

And while these brilliant luminaries dazzled men's minds, many another won the hearts of humble disciples, not so much by the constancy of their courage, though this was often tried, as by the humility of their presence, the purity of their lives, and the manifest disinterestedness of men whose kingdom was not of this world, who carried neither purse nor scrip, and whose highest ambition was to found a church, and their keenest joy to save a soul.

Some too were faithful unto death. De Britto obtained, as he desired, the crown of martyrdom from the bigotry of the Prince of Ramnad, the head of the Maraon tribe; and De Vieyra pined in the prison, and was only saved by the superstitious fear of another prince of the same line. It is written on every page of the narratives of these simple faithful missionaries, that they went up and down the country with their lives in their hands; exposed constantly to the fury of wild beasts, and at times to the passions of men more cruel still. It is not, however, to weave a tale of sensation and marvel that we search this record of the past. The age of miracles has passed with that of chivalry: and though Xavier cured the sick and raised the dead; and hardly a single missionary but has his tale to tell of miraculous cures, and conversions, and interpositions of supernatural power; these triumphs of faith may be left to those for whose benefit they are recorded; and we shall gratefully glean only the historical atoms that strew these pages.

The period of years with which the story deals lies between the year 1540 and our own time. An unbroken chronicle for these last 300 years for any portion of India is so rarely found as to be invaluable. The meagre jottings of the first heads of the English factory are almost barren of national information and interest. But in the letters from the Jesuit missionaries of Southern India, we have a contemporary chronicle compiled not by interested officials nor by prejudiced Englishmen, but by gentlemen and scholars, who, as they hoped nothing

for themselves from princely favour, cared little to conceal the truth about public acts ; who, as they wrote to distant authorities at Rome, were secured beneath the veil of secrecy : and who, having adopted this country as their home for life, and its people as their children in Jesus, were raised above the prejudice of race, and imbued with paternal love as well as with priestly zeal.

- Such a chronicle is unique and full of value ; but it may be difficult to knit into an intelligible story the scattered allusions, rather
- than statements, that light up the political history of the time. Let the attempt however be made. The verdict we must leave to our readers.

The empire founded by Vasco da Gama in 1503 had been securely established on the western sea-board of India at Vasco's death in 1515. Under John III. of Portugal, the national dream of universal conquest was fostered by the religious ambition of Loyola and his disciples, who hoped with a handful of enthusiastic teachers to convert the world. Among this band came Francis Xavier ; but the record of his Indian mission is as brief as it is brilliant. Three short years he laboured on the Southern shores of the great continent, and then passed on to distant China and Japan ; impelled by an ardour that no toil could satisfy, and torn by a restless hunger for new conquests, as keen as, but far purer than, that of the Macedonian Alexander.

The mission of Xavier to the Comorin coast began in 1543 ; and though one brief excursion carried him as far north as the present site of Madras, or Méliapur—then, as now, famous for the martyrdom of St. Thomas—his ordinary range lay between the Cape of Comorin and the point of the mainland opposite the Island of Ceylon.

Passing from Goa early in 1543, and staying among his countrymen and brother-religionists in Cochin, which was evidently subject to the Portuguese, he arrived in Tuticorin about May of that year.

Here his reception by the 'Pallawares' or pearl-fishers was so warm and kindly that he speaks enthusiastically of the "rich spiritual harvest" that he hopes to reap. The name of the caste or tribe here referred to, is properly *Paravar*—and they are now, as then, one of the most numerous as well as the most influential of the castes or tribes that people the coast.

Their chief occupation seems at the time of Xavier's visit to have been the pearl-fishery, for he says that they 'derive their means entirely from that source' ; a statement which confirms an impression generally entertained that the condition of the pearl-banks of this coast is very much changed for the worse since those days.

To this subject we may hope to recur, after examining the political status of the country.

That the extreme end of the peninsula was then in the possession of the Travancore dynasty, is clear from express references made by Xavier to the authority of the King of Travancore, to whom he gives the extraordinary name of Iniquitribirim. But it is equally clear from his express statements, and from the events which he records, that a very real claim was constantly asserted by the Madura rulers, to the right of levying tribute within the Travancore territory. This is noteworthy, for the most careful record of Madura history places the independence of the Madura dynasty of Nayakkas as late as 1559; and treats the Governors of Madura up to that time as mere vassals of the tottering Vijayanagar house. According to the same record—we need scarcely say that we refer to Mr. Nelson's Manual of Madura—the name of Varataffa Nayakkan is given to the Governor of Madura in 1544, the year of the invasion of Travancore; and the first of the independent line is stated to have been Virvanada Nayakkan who came to the throne in 1559.

However this may be, the inference is irrefragable that the ruler of Madura, whether his power was independent or derived, was titular and actual sovereign of the whole Southern India Peninsula as far as Cape Comorin. How far the dominions of the Travancore dynasty then extended is hardly clear; but there seems to be no reason to think that they stretched further to the N.-E. than they now do, for the ravages of the Badages (of whom we will presently speak) did not reach so far as Manapadu, which lies twenty miles to the south of the mouths of the Jambrapurni river in the Tinnevely district. The country along the coast to the north of Travancore was locally administered by a number of petty chiefs, whose obscurity compelled them to obedience, and whose obedience secured them from the violent treatment which Travancore endured. Tala, a now ruined town in Tinnevely, was in 1544 the seat of a petty Raja connected by kinship with the Travancore family; and he distinguished himself by his favourable treatment of the Jesuit missionaries and their converts. The days of persecution and suffering had not then been ushered in by political ruin and national disgrace. The name and fame of the Portuguese were a passport along the coast for every white man; the ægis of the Viceroy of John III. had power to conciliate the affections of every prince he protected, and to secure the life and fortune of every European whom the desire of gain or the fervour of religion impelled to travel in Southern India.

So, too, in Tuticorin; which three centuries ago was the headquarters of the Paravar tribe, and of their pearl-fishing industry;

a local Governor possessed a purely local influence ; but the hand of the paramount power lay so lightly on these distant dependencies that the subject scarcely felt that he had a master.

The incidental touches of political colour that Xavier gives to his missionary chronicle are as interesting as they are faint.

The 'Governor' of Tuticorin is not named, nor described in any way ; but as he is said to have been like a 'father to the fishermen, and they like his children,' it is more than probable that the Governor was an officer of the Paravar race—the Talevian or head man, who still asserts, though he scarcely exercises, a titular supremacy over the Paravars of Tuticorin. His power, however, must in those days have been very real and locally almost irresistible. Not only is he said to have protected the converts to Christianity and encouraged them in the faith, which he himself hesitated to join ; but Xavier records how he succoured his tribesmen from the oppression of *Les Sarassins qui les inquiétaient*. The Saracens at Cape Comorin ! one may well exclaim. But we suppose the mystery is hardly a mystery ; for just as the Englishmen used to call every body who believed in Mahomet a Moor ; so the Jesuit when he met the followers of the Prophet, thought of Saint Louis and Joinville's chronicle, and named them all Saracens, without respect for latitude or for race.

Thus from this bare allusion we may gather two facts—first, that Musalmáns had penetrated as far south as the Tinnevely country early in the sixteenth century in sufficient numbers to assert for themselves a political existence ; and secondly, that they were not in force sufficient to stand against the power even of this local chief of Tuticorin.

This is the only allusion we have noticed to the presence of the 'Saracens' along the coast, and they were evidently not nearly so formidable as the 'Badages' or marauding troops who ravaged the Travancore country in 1544. Who these so-called 'Badages' were, it is more difficult to determine ; and the conjecture that we propose to hazard is put forward with the utmost diffidence. At first sight the word recalls the tribe, still known on the Nilgiri hills of Coimbatore, as 'Badaga,' a sub-division of the Toda and Tuluva race. But, apart from the geographical difficulty of transporting the tribe some two hundred miles to the south of their present home, it is ethnically impossible that a tribe, which now consists of a few miserable families, could, only three hundred years ago, have been a formidable political power. We know of no cause for such a downfall, and are, therefore, obliged to reject the idea of such a former elevation.

A simpler explanation offers itself in the erroneous rendering of the word transliterated by Xavier into 'Badages.'

The Tamil word 'vadakku' means the north ; and the

strangers who came from time to time to gather plunder under the name of tribute, were simply known as the men from the 'North.' To this day a stranger, whencesoever he comes, is said vaguely to come from the 'North'; naturally enough in this extreme corner of the land, in which all the roads point northwards. The frightened dwellers on the coast fled in terror before the 'north-men,' whom we may with every appearance of truth identify with the marauding troops of the Madura ráj; the Kallars or thieves; the *Collieres* of Orme: whose genius for the profession of banditti and cattle-lifters made them the dread of English troops two centuries later; and still survives to the perplexity of policemen, and the grief of magistrates.

The 'Kallar,' and their kindred in origin and habits the 'Maravar,' poured in 1544 over the Passes into Travancore, and literally swept the coastmen into the sea.

From Manapadu in the month of June, Xavier writes that he has just learned this disaster which has befallen his flock.

Les infortunés sont dispersés et trainés en captivité par les Badages. Le reste s'est réfugié dans les creux des rochers qui dominent la mer.

And, in a letter soon after, he writes that his 'unhappy converts, terrified at the approach of the Badages, those furious enemies of Christianity, have abandoned their villages and have gone to seek an asylum on the desert islands among the rocks.' It may be doubted whether the plundering invaders knew of, or cared much for, the conversion of these coastmen to Christianity. The invasion was directed against the King of Travancore, who was no Christian; and those who became its victims were his subjects, Christian and heathen alike. This is clear from the fact that the invaders did not extend their ravages beyond the Travancore marches. At Manapadu the Christians found themselves safe, and there Xavier welcomed and consoled them.

The King of Travancore meanwhile was too weak or too indolent to resent the raid, which reminds one of Rob Roy and a Highlander's lifting expedition more than of sober warfare; until Xavier threatened him with the displeasure of the Portuguese Viceroy, who, he said, 'was ready to avenge the wrongs of the poor Christians, as if they were his own.'

Such a message implies the existence of the power to execute the threat. A man of policy and peace like Xavier would never have blustered and threatened a Hindu prince with punishment that he was powerless to inflict; and we gather from this that the power of the Portuguese in 1540 was able to make itself felt at least along the coast to a very considerable distance from their political capital, Goa.

But the Portuguese do not seem to have had the colonising faculty. The tree grew straight and tall, but its branches did not

spread, nor its roots scatter. Like the native tree of the Western coast, the Cocoa palm, the Portuguese power topped every neighbour, and towered over every rival potentate. But a growth so limited and a life so narrow were liable to one fatal stroke, and fell under one axe-blow. There were no separate centres of vitality at which to strike fresh root and to renew the struggle for political existence, and this inherent weakness was fatal to the most exuberant growth of local power.

- The coast of Malabar felt the presence of the European master; and the threat of the Portuguese Viceroy's anger was a real dread as far south as Travancore. But on the Eastern coast of the peninsula there is no sign of the activity of the Portuguese power. Tuticorin was, as we have seen, practically independent, the subject of masters who issued no orders, the vassal of a suzerain who exacted no service.

Further up the coast a new power made itself felt; and no part of Xavier's record is more interesting than the allusions which inform us of the influence then exerted by the rulers of Ceylon upon the mainland. The political relations that have from time to time existed between Southern India and Ceylon are full of obscurity and uncertainty. Ever since Ravana fell beneath the avenging arm of Rama, the god-hero, the connexion of continent and island must have been maintained. The bridge of Nala was broken; but the narrow and shallow sea tempted adventurers, who were sure of reward in changing the barren sands of Marava for the tropical paradise of Lanka.

History for the few centuries that its pages illustrate; tradition that precedes and only distorts history; and the myth or fable that makes its heroes into gods, and its men into monkeys, but records under a veil of the supernatural the actual and the real; all these unite to tell us that Southern India and Ceylon have had their Norman conquest, and their battle of Lincoln, their Calais and Agincourt; that the island has from time to time annexed large portions of the mainland; and again that the continent has hurled the invader into the sea, and confined him within his natural bounds. Each dynasty tells the story after its own fashion, and the balance of victory largely preponderates always on the side of the teller. The Pandyan kings are distinguished by titles won in victories over the kings of Kandy; the Marava rulers of Ramnad are related to have defeated this king of Kandy and that. But the fact is admitted on all hands that the power of Ceylon extended from time to time to the continent of India; for the oldest shrine in the holy places of Rameswaram is locally said to have been built by the king of Kandy during his occupation of the Marava country; and we find here in Xavier's record, that three centuries ago the Ceylon raj included wide possessions on the mainland.



Xavier expressly records that the king of Jafanapatam, the modern Jaffna, 'was master of the islands of Manar'; and this expression can scarcely be taken to mean anything but Rameswaram and the islands that line the coast from the Strait of Pamben to Tuticorin.

Further he notes that the 'Governor of the province of Nega-patam, commonly known as the Mudaliar, is in high favour with the King of Jafanapatam'; and this can hardly mean a friendship founded on any basis but that of allegiance to an acknowledged sovereign. However that may be, the power of this Jaffna king is shown to have been very real; for we find further that the Portuguese were obliged to engage in serious warfare with him, to obtain satisfaction for a political injury. The story is thus told by Xavier, who was hoping to proceed to Ceylon in the spring of 1545, and to obtain redress for the converts that had already been won to Christianity by Jesuit teachers but who suffered from the persecution that the king of Jaffna directed against these renegades from the national faith.

Although this visit was rendered impossible by the outbreak of the hostilities referred to, the wonderful success of the early Christian missionaries is well illustrated by the incident.

In December 1544, Xavier writes that the king of Jaffna is barbarously illtreating the newly converted Christians; and again in February of the following year he speaks of him as "resolutely shutting the doors of his kingdom against the approach of Jesus Christ"; while, notwithstanding this opposition, the number of converts would have reached 100,000 before the end of that year.

Suddenly, however, the persecution ceased; and the doors of the kingdom were thrown open by the king, who in May 1545 had already promised himself to adopt the new creed. Now, as often before and often since, political strife crushed religious fervour. A quarrel with the Portuguese turned the tide strongly against the teachers of the new faith; and instead of going to claim their royal convert, the missionaries were afraid to set foot in the island; feeling that political rancour and religious hatred would unite all classes against them. And so:—*l'expédition de Jafanapatam vient d'aboutir à néant; et le roi, qui avait promis de se faire chrétien, n'a point été rétabli dans ses tatés . . . . . Un vaisseau du roi de Portugal revenant de Pegou fut abordé sur la côte de Jafanapatam, et le roi de ce pays s'étant emparé des marchandises, les Portugais ont cru devoir surseoir à la guerre pour la restitution de leur propriété.* Disappointed in Ceylon, Xavier left India for Singapore; and so his Indian mission ended. He left the country an earnest missionary, he returned a canonised saint. His embalmed body was borne from the Eastern seas to rest in its sepulchre at Goa; and at each halting place on its

way, the Jesuit converts vied with each other in the expression of their reverence, and the genuineness of their regrets. Miracle and marvel were soon busy with his name ; and another generation learned how the sick were healed, the dead were raised, and the very sea forced to yield its pearls at the word of the great Guru. His own narrative knows nothing of these things. It is a plain story replete with the evidences of truth and simplicity. The ingenuity of later marvel-mongers, and the necessities of rival churches, gave rise, long centuries after, to the tissue of fable which has been woven round his life ; and which has placed him on the same level with St. Francis of Assisi as a worker of wonders. Still on the coast of ' La Pécherie ', as the Jesuits named the sandy tract from Cape Comorin to Rameswaram, the name of the great saint is a landmark in the past. The ' days of Xavier ' are the point beyond which the memory of Christian man runneth not to the contrary. Well would it be for the progress of the faith he preached if, in reverence for his name, and imitation of his example, national rivalries and priestly jealousies could now be stilled. The Church of Goa that guards his bones might well remember that he too was a Jesuit ; and the Jesuits of to-day might well cherish the memories of the great Goa missionary, who knew nothing of the prejudice of race, and who hated nothing but heathendom ; who, if he were at the head of the Church to-day, would suffer no divisions in the Church of Christ ; knowing that as union is strength, no scandal can be so injurious as the sight of rival sectaries wrangling over the rags and tatters of ceremony.

Thus we have gathered from the pages of Xavier's record the gleams that flash upon the political landscape of three centuries ago. The social side of his story, the insight he gives us into the condition of the people and of the country, is not so full and complete as the corresponding portion in the stories of the missionaries that came after him.

Probably this is partly due to the fact that, as his journeys were almost wholly confined to the littoral districts, he travelled mostly by sea ; and therefore gives us no descriptions of his road, nor of the perils of his way.

A few allusions, however, to social details are very interesting ; as showing us in what the people of this coast have remained as they were, and in what they have changed for the better.

The converts to Christianity consisted chiefly of the fishing races of the coast, and thus belonged to two principal castes or tribes :—the Paravar, who have been already described ; and the Kareiyar, a lower race of similar occupation. Karei means a bank or the coast, and Kareiyar means simply the coast-dwellers ; and this caste, partly from the inferiority of social status, and partly from the superior wealth of the Paravar, were the

servant fishermen of that tribe. We read of two separate villages of Christian 'Carians'; and it is only natural that the subject race should have imitated the example of their masters and employers in adopting the new creed. The village organisation of the country was evidently then complete, and similar in form to the usual republic, under a paternal head, that prevailed throughout India. Xavier uses two distinct names for the village head-man. One is reduced in French to *patangat*, a sufficiently meaningless and uncouth word; but which only half-conceals the original Tamil *pattanu-karan* or townsman. The second is *Adigare*, a faithful transliteration of the vernacular *adikaran* or man in authority. If there was any difference between the two, it probably consisted in the popular appointment of the first, and in the official appointment of the second officer, who is also called a 'magistrate'. But perhaps the most striking and characteristic touch in the whole of Xavier's letters is that which indicates the habits and moral condition of the Paravar tribe in the clearest manner. From Manapadu, in March 1544, Xavier writes that he "has prescribed a fine of two Fanams (5 annas or 7½d.) to be inflicted "on every Paravan woman who gives way to her passion for that "liquor which induces delirium, and which is known as arack; "and three days, confinement for every woman who is convicted "of the vice of habitual drunkenness."

His priests were also directed to "proclaim in the same way to "the heads of villages, that if in future arack-drinking is allowed "at Punikayal, I will render them responsible for it, and punish "them very severely."

Violent remedies spring from and argue the existence of violent diseases; and if these severe measures of fine and imprisonment were then necessary to check the prevalent vice of drunkenness, the evil must have eaten deep into the habits of the people. Let it be acknowledged, then, that in this most important point the descendants of those drunken Paravas, men and women, have abandoned the error of those ways. A drunken Paravan woman in the streets of Tuticorin is at this day an impossible sight. And if a diver, after the hard toil for shells that lie five fathom deep, relieves his feelings with a draught of the evil 'liquor that causes delirium,' the excuse is sufficient, and the offence not frequent. Certainly they would not now-a-days get three days' imprisonment for such a breach of decorum. But if the evil has been stamped out in the women, and much abated in the men, no little share in the good work was doubtless effected by Xavier's salutary severity. Indeed, the mode of life of this worthy industrious race has been, we think, wholly changed by their contact with Christianity. We do not refer to the elevation of doctrinal belief, to the adoption of a purer creed, with higher objects of adoration, and

worthier aims both for this world and another. These are undeniable and undoubted. But we refer to that social growth, which enables man to rise higher above the lower world ; to widen the gulph between him and the thoughtless brute ; to find some worthier object than sensual passion, and some nobler aim than the morrow's meal. Picture that group which two strokes of Xavier's recording pen places before us, of the Paravan women of three centuries ago. Sodden with arrack, riotous as Moehads, lost to their own shame, and their husbands' love, and their children's reverence. We revolt from the sight, not only as Christians but as men ; and to remove such a blot is a service to humanity while it promotes religion. A stranger to India would be struck by the present fashion of the Paravan women ; and those who after years of residence have learned how low women sometimes stand in the scale of humanity, cannot but rejoice to see the gravity and morality and self-respect that distinguish the public life and the private manners of the women of this race.

Nor can we doubt where to look for the secret of such a change. The idealisation of the softer virtues of humanity, in the adoration of the mother of God incarnate, turned the thoughts of these poor ignorant fishers into a new groove, and set before them an ideal of beauty and excellence that had never graced their sordid and almost savage life. Woman stood at the head, and no longer at the foot, of humanity. She was no longer the drudge of rude, rough men, but their companion and their friend ; and instead of a slave on earth, man found in woman an angel of heaven.

The good seed that Xavier and his fellow workers sowed has thus borne fruit as valuable as, though perhaps different from, any that the labourers looked to gather. The Christians of Southern India will never, perhaps, obtain a strenuous robust persuasion of the essential dogmas of the faith of the West. But purity of life, and respect for woman, and industry and honesty and courage, are virtues that distinguish in no contemptible degree the fishermen of La Pécherie, and which may well be thought to countervail the skill of churchmen, and the accurate pronunciation of the Shibboleths of creeds,

J. H. BOYLE.

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## ART. IX.—GOVERNMENT LIFE ASSURANCE FOR NATIVES.

IT is hardly possible to exaggerate the importance to the native community of the proposal that has recently been made for the establishment of a system of Life Assurances for natives, conducted and guaranteed by the Government ; or the extent to which such a measure, if adopted by Government ; would be felt to be a boon by a very considerable section of the people. The following remarks are submitted to the readers of the *Calcutta Review*, in the belief that the experiences and opinions of a native, of the class most affected by the proposal, may be interesting to them.

About 1861, myself and some of my friends felt disposed to insure our lives ; but on enquiry we found that no Company would take us in. Then in 1868, having learnt that the Albert had commenced to assure native lives, some four or five of us insured our lives there for sums varying from two-and-a-half to ten thousand rupees. Many others also were desirous to do the same ; but being more prudent and hesitating, they took time to make up their minds, or wanted to see how our adventure turned out. But within a short time the Albert collapsed ; and the consequence was that even those who had made up their minds to insure their lives, imbibed a strong prejudice against the whole affair ; and there were not wanting, among our friends, many who taunted us for having entrusted our money to a foreign Company, of whose affairs we were entirely ignorant.

Some of us have again insured our lives at the office of a great English Assurance Company, mainly because that company was among the first to come forward to take in native lives. Of course we are not in a position to be able accurately to estimate the probable stability of any European company ; and consequently we cannot feel any great confidence in the safety of our investments. Nevertheless, we insure, because we look more for our comfort while living, from a sense of having done something towards making a provision for our families, than for the certainty of our families getting, after our death, the money that we insured our lives for. Before the Albert had failed, we did not hesitate a moment to recommend our friends to insure their lives ; but it is easy to understand with what doubts and reservations we now speak to persons who ask our advice if they should do so.

From these facts, it will be seen and inferred that a large number, among men of our class, strongly feel the necessity of insuring their lives ; that those who now insure at the offices of

companies that take in native lives, do so almost with the expectation that the result will be the same as in the case of the Albert; and that others refrain from insuring their lives only because they can have no grounds for confidence in any Company.

Most men of our class, *i.e.*, descendants of high-caste and respectable families, but of reduced means, are so peculiarly circumstanced, that insuring their lives is a most urgent necessity with them. Our forefathers used to earn large incomes which they spent according to their ideas of utility; so that they have left us to inherit a social position of some consideration to keep up, but no adequate realised property from the proceeds of which to do so. As soon as we come of age, we find ourselves saddled with a large family of widowed female relations with their children, and sometimes even male relatives, who cannot now earn their livelihood on account of old-age, or the altered circumstances of the country. We have more distant connections, whom, though we may not have actually to support, we are required to assist in their need. Besides, we have feasts, donations and ceremonies to keep up, if we desire to preserve anything of the respectability which our fathers and grandfathers enjoyed. This circumstance is the secret of the avidity with which men of our class seek the bread-earning education of the day—the eagerness with which they seek employment, and the entire absence of enterprise requiring time for the realisation of its benefits in them.

Having such large expenses to meet, from whatever income they may derive from service, the utmost they can do is to make the two ends meet. They find it impossible to save anything worth the name. Almost all high-caste people, *i.e.*, those belonging to Bráhmaṇ, Vaidya, and Kayastha families, with the exception only of the few who are big zemindars or rich capitalists, are under such straitened circumstances, whether they follow the professions of law, or medicine, or some Government or other employ, or follow mercantile and other pursuits. Their education and feeling of respectability make them extremely desirous of making some provision for their families, but they find their earnings quite insufficient to enable them to save anything to the extent they desire.

If under such circumstances, Government were to lend the security of its name to some system of life assurance, and a short time were to elapse to enable everybody to see into the matter, almost the whole of this class of men, constituting more than ninety per cent of those who receive an English or other kind of education, are sure to insure their lives, and consider the measure as a very great favour extended to them by Government.

Permit me to say a word here in extenuation of the great fault of spending beyond, or up to, one's income, with which many will

doubtless consider this class of men chargeable. The fact is they cannot help themselves. Being born Bengalis, they must, generally, conform to the usages of Bengali society, where a man's earnings are not his property, but that of his family ; and where, in matters of family concern, which, in the end resolve themselves simply to questions of expenditure, the desires of a mother, or other head of the family, have to be consulted in preference to those of the earner himself. The donations, feasts, ceremonies and *pújás*, are not things absolutely wrong in themselves, against which a man's moral nature should recoil in disgust. The donations are always made to persons with whom there is some bond of relationship, and from whom such assistance is expected in return in time of need. They are a sort of insurance against evil times, though of a very imperfect character. Feasts and ceremonies are merely occasions of social gathering, which are necessary, to some extent at least, for the moral well-being of a man. The *pújás*, are not the orgies that many Christian gentlemen imagine or describe them to be ; along with much that is unmeaning and foolish, there is something in them which satisfies the spiritual cravings of men of a certain stage of development. But it is not my purpose here to support these occasions of unnecessary expenditure.

However innocent or useful they may be in themselves, they are wrong and hurtful, inasmuch as they entail so much unproductive expenditure, and encourage or compel living beyond one's income. But though their enormity may be patent to us, we can only reduce them *bye-and-bye*, along with a general diffusion of intelligent education. We cannot avoid them *altogether*, and *all at once*. There are but two alternatives which men of this class can adopt. They can either cut themselves off altogether from Hindu society, their families and relatives, and live after a fashion of their own : or they must live in the way they do. But every fair and thoughtful man will certainly excuse a Hindu, with the training he has received since childhood, and the inherited tendency of a thousand generations, for choosing the latter alternative and clinging to his kith and kin for better or worse. His mother or other close connection, who had seen better days, and had their early training at a time when the difficulties of to-day did not exist, he cannot bring his mind to leave to their fate ; or to treat them, after he has become the earning member of his family, otherwise than his father and grandfather have done. It is difficult for a foreigner to conceive the depth of self-degradation that a Hindu feels when he finds himself unable to maintain his family in as much ease and comfort as they have been accustomed to before his time.

Along with all the expenditure mentioned above, the class of men of whom I speak have now to meet those incidental to a

considerable change in their mode of life, tastes, and habits. Articles of food, clothing, furniture and so forth, have now to be of much greater value than what used to satisfy their ancestors. All this, coupled with the great rise in prices of late years, place men of this class in a condition of which the difficulties can scarcely be exaggerated. Is it strange, therefore, that they find it impossible to save anything from their scanty and limited incomes, are often compelled to borrow, and thus make themselves liable to reproach for extravagance?

Under the native *régime*, the ancestors of this class, who constituted the high-caste middle class, held situations of importance and high emoluments; and in professional, commercial, or other pursuits, had not to withstand the competition of a superior race of foreigners, such as their descendants have now to do. Under the circumstances of those times, they were able to maintain their superiority over the other sections of the community in almost every walk of life. Such among them as possess more than ordinary talents and strength of character, often raise themselves to great eminence. But their descendants now, having that respectable position to maintain, are very heavily weighted in the race of life, whether in State employ or other pursuits.

The great rise in prices and wages that has taken place, is the result of a foreign trade, the profits of which form no part of the capital of the country, and which has destroyed most of its important indigenous industries. So that not only has State service, available for this class of men, been limited to the lower and least-paid grades; but the field of private enterprise has also been extremely narrowed.

These circumstances are the natural results of the country's coming in contact with a stronger and more civilised race of men. A century or so hence, the country will doubtless arrive at a much higher stage of development, than if it had been left entirely to its indigenous efforts. But in the meantime the position of all classes, except only those who are very rich and who are directly engaged in cultivating the soil, is really deplorable. It is a serious question with the high-caste classes, whether they are not in the way of being exterminated from sheer inability to maintain their position or sink in the struggle for existence. That they already are is the firm conviction of many among us, based upon a comparison, in a large number of cases, of the number of male members now living in each family, with those that lived at one time, twenty-five or thirty years ago.

Men of this class naturally believe that the possession of the country by the British is the cause of all those changes which have placed them under such great disadvantages. It is nothing but fair that Government should do something—by accepting, for



instance, the proposal that has now been made—to compensate them, to some extent, for the loss of the position they held in society from time immemorial. They are at the worst a very improvident class of men; and if the reformation of the criminal, and the education of the ignorant, classes be objects of solicitude to Government, surely the holding out to these men the prospect of having a competence for their families, and thus tempting them to save something from their incomes, or, in other words, teaching them to be less extravagant by guaranteeing to them the benefit which is to result from their economy, cannot be an object unworthy of the attention of a powerful and benevolent Government. By adopting the measure, Government will greatly help the accumulation of capital, by means of small savings, effected *under compulsion*, as it were, from incomes now almost entirely frittered away in unproductive expenditure. Even if there be a loss in this insurance business, it will only be paying the money raised in the country for the benefit of a large and important section of the community. But, instead of loss, there is almost the certainty of some profit being made.

If, under such circumstances, Government do not adopt the proposed measure, it can be, so far as we can understand, for no other reason but because they do not know or sympathise with the difficulties and disadvantages of the people.

But if adopted by Government, the measure will have much the same appearance as the provision which native gentlemen used to make for the families of their deceased servants. In India, it is understood to be the duty of an employer that he should make some provision for the families of his deceased servants. That the British Government does not do what native gentlemen used to do in that way, only detracts so much from its popularity, and is believed to arise from a want of sympathy with the people, by those who do not know that in England also Government does not generally make such provision. Since the death, lately, of Bábu Dina Bandhu Mitra, of the Post Office, all the native papers are asking Government to do something for his children, for whom he could make no provision while living: Such a proposal may appear unreasonable to a European; but every native will feel it only quite natural that Government, whom the Bábu served faithfully while living, should, on his death, assume the responsibility of the position of *má-báp* to his helpless children.

Such being the state of native feeling on the subject, one can easily understand how greatly Government will increase its popularity, if payments (of assured sums) are seen to be made by it to the children of its deceased servants. It will not, indeed, be doing the same thing that Native Governments did; but the payments of premiums, made by Government servants, in order

to secure the insured amounts, will be regarded by the generality of the people as so much less pay drawn by them.

Holders of Insurance Policies from Government, like the holders of Government Securities, will have one more reason (and that a very strong one, as touching them personally and pecuniarily) for being interested in its permanence and prosperity.

The class of men who are likely to flock in to hold such policies, I mean the educated middle class of the higher castes, are the most influential in the community. All the zemindars of the country (except only a few very rich among them, who may be said to form the higher class), belong to this section. The big zemindars, when they do not themselves belong to the educated class, are mostly guided by men of that class. Either directly as zemindars, or as advisers and servants of big zemindars, they wield an immense influence over the ryot class. Owing to their education, intelligence and position in society, they exercise great influence over the other men of their castes, and the vast majority of the people of other castes. Lastly, as authors, newspaper-writers, lecturers, and teachers, they have a great hand in moulding the aspirations and feelings, the sympathies and antipathies of the rising generation. Surely it is worth the while of Government to make this class interested in its prosperity, by one more tie, if that can be so easily done, by undertaking a business which, in other countries, private companies carry on for profit.

With regard to the details of the measure I have not much to say. The greatest obstacle to a man insuring his life, is his want of confidence in the Assurers. But the security of Government is practically absolute, and it is understood to be such by the class of men who require to insure their lives most. There is the thought that if in future one is unable to continue his payments, all the money that he will have by that time paid, will go for nothing. But this fear will also be removed by the principle proposed, *viz.*, that a policy-holder failing to pay his premium regularly, is to be entitled in case of death, for his family to get a certain amount, calculated in consideration of the premiums that may have been paid by him, before getting into arrears. Those who once fall into arrear ought to be given the option to revive their policies, on the payment of a fine; which should be so fixed that paying it may not be an equal or a greater loss than the payment of the enhanced rate necessary on account of increased age, if a fresh insurance were to be made at the time.

I do not think it will be proper to allow the surrender of a policy. It will be offering a temptation to draw on the future, which so many of us are so apt to do. In order to meet the case of men who may get rich after insuring their lives, and wish to

be freed from the bother and anxiety of having punctual payments to make periodically. Government may undertake, on the assured handing over to it Government Securities of sufficient amount to cover from its proceeds the payments of premium, to return it together with the amount of insurance, on the death of the assured.

I do not know if there exists any collection of statistics that may justify Government in charging natives a higher rate of premium than Europeans pay in this country. If there is none, there is no necessity for charging a higher rate at the outset, or till the accumulation of facts should prove it to be necessary. There is no reason to fear, that in the case of natives, Government is likely to experience greater difficulties with respect to the proof of age, satisfactory references, medical examination, evidence of death, &c., than attend the case of Europeans insuring their lives at private offices in this country. I do not think such Europeans produce their birth-register certificates as evidence of their age; and the possession of a registry of births is, I believe, the only important circumstance that makes a difference between a European and a native in this respect. It may be provided, that, in addition to such testimonies as to age, as a native may produce, he is to name two or three persons, residing at the sudder station of a district, in whom the Collector and Magistrate may be expected to have sufficient confidence, who are to communicate to him what they know of the age, habits, and general health of the proposer. These persons may be appointed by the assured as trustees to receive the moneys after furnishing satisfactory proof of his death; and when any of these men die before the assured, the latter may name another to fill his place, with the approval of the Collector. In doubtful cases, the Magistrate may make inquiries, through the Subordinate Service in the villages where the insurer may have been born, or may have lived or died.

With regard to the regular payment of premiums, Government need be in no fear of any difficulty, for those who will insure their lives in this country will, like people in other countries, understand such a plain case of self-interest; and not stand the chance, by their irregularity, of forfeiting the full benefit of their previous payments.

The minimum limit of Rs. 500 suggested in the questions circulated by Government seems to be rather high. Why not make it Rs. 250, to meet the case of those who most urgently require the provision of insurance? The maximum may well be Rs. 30,000. If Government undertake the business, the more lives that insure the better; then why exclude pleaders, mukhtiyárs, small zemindars, and merchants, who are exactly the same class of men as Government servants?

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Within the first five years after the adoption of such a measure by Government, I fully expect 100 persons to insure their lives in each district on the average. After deaths commence to take place, and people see that Government actually pays the sums assured, the number is sure to increase at a very rapid rate.

DINA NATH SEN.

## ART X.—FAMINES IN INDIA AND THE DUTY OF GOVERNMENT IN CONNECTION WITH THEM.

**T**HE first duty of a Government in connection with famines is to do everything it reasonably can to prevent their occurrence; its second duty is to do all that can reasonably be done to mitigate their effects when they occur. An investigation of the causes and conditions of famines, therefore, naturally occupies the first place in any enquiry on the subject; and the questions with which such an investigation deals, will be partly of a physical and partly of an economical nature.

The liability of a country to famine does not depend on mere poverty of soil, or on any other constant causes limiting the amount of its food-supply; for all such constant causes at the same time limit its population. The deserts of Arabia are not more liable to famine than the fertile plains of India. Indeed, it is quite possible that great fertility of soil may aggravate the mischief of famine, when, owing to some of the other conditions on which production depends, failing, it occurs. It is not in a barren country with a small population, but in a highly fertile country with an abundant population, that a sudden failure of the harvest is liable to be attended by the most disastrous consequences. The relation between population and food-supply tends continually to an equilibrium; and the more constant the latter of these functions is, no matter what its actual amount may be, the more nearly this condition is attained. It is, in fact, to violent fluctuations in the ratio between food-supply and population, due to inconstancy in the causes on which the former depends, that the liability to famine is to be traced. It follows that it is not to any mere increase of fertility or of the average amount of the food-supply, but to the removal of these causes of inconstancy, that we must look for the means of preventing the liability to the horrors of famine.

Since the meteorological and other conditions on which fluctuations in the yield of the soil depend, vary for different tracts during the same period, an abnormally small production in one tract being counterbalanced by an abnormally large production in another, it is obvious that the greater the area from which a community draws its food-supply, the more nearly is constancy in the amount of that supply attainable, and the less liable is the community to be overtaken by famine.

There are, therefore, two altogether distinct modes of diminishing the liability of a community to such catastrophes, the one by

increasing the constancy of the physical conditions of its own production, the other by extending the area from which its food-supply is drawn.

In a country where the chief source of liability to failure of production is deficient rain-fall, the nearest approach to this constancy is attainable by rendering production as far as possible independent of the need for rain, and the most effectual means of doing this which science has yet discovered, is irrigation.

Where, on the other hand, floods are the enemy most to be dreaded, the only available remedy is a system of embankments and drainage. In no case, however, is it possible, in the present condition of science, to attain to absolute constancy, or even to prevent all liability to such a degree of inconstancy as involves the risk of serious famine. Many of the physical causes upon which production depends, or by which it is liable to be unfavourably affected, are entirely beyond human control. No human precaution, for instance, can guard against hail, or storms, or the ravages of locusts, or some forms of blight; and, in Ireland, we have lately had an instance of the almost total destruction of a crop on which the population depend for their subsistence, by a cause which is not only so far unpreventible, but the very nature of which is a mystery.

No community, therefore, which draws its food-supply from a very limited area, can be absolutely secure from the liability to famine; while one which draws its food from an extended area, though it has adopted no precautions to guard against violent fluctuations in the amount of its own production, may be comparatively safe. Even in the latter case, however, the security is far from being perfect. There are records of the whole of Asia being simultaneously affected by a destructive drought. Such a calamity, it may be said, does not happen once in five hundred years, and is of a kind which it transcends the legitimate functions of human prudence to guard against. There are, however, other sources of uncertainty of a much less rare and remote character. No matter how extensive may be the area from which a community draws its food-supply, it may be entirely cut off by causes beyond its own control, from all possibility of communication with the rest of the world, or its foreign communications may be so seriously interrupted, that it cannot depend with any certainty on outside sources of supply for its subsistence. It will suffice to mention a state of war as one of the circumstances by which it may at any time be reduced to this condition.

The most perfect security against famine attainable is, of course, to be found in a combination of both the modes of precaution to which we are referring. A community which has done all that lies in its power, to obviate inconstancy in the amount of its own production, on the one hand, and, on the other, to extend the area

from which it can draw its food-supply, is as well off as regards liability to this misfortune, as human effort can make it.

It is, however, by no means certain that under all circumstances a community is bound to do, or would be justified in doing, all it can, in either of these directions. Inconstancy in the physical conditions of production in some countries may involve so small, or so rare, a danger, and on the other hand the means of entirely obviating it may be so burdensome, that the remedy is worse than the disease. In a country where serious drought is known to occur only once in a long series of years, and where the water supply in other years is so abundant that irrigation is then absolutely useless, the burthen of constructing and maintaining the necessary works may be a matter of greater moment than the distress, or even the loss of life, liable to be caused at distant intervals by a famine. It is a moot question whether Bengal is not in such a position.

It is not always, however, the main body of the community themselves who are capable of rightly deciding a question of this kind. In many parts of the North Western Provinces, where irrigation would be in most seasons remunerative, and where the liability to drought is comparatively frequent, the people, if left to themselves, would, from sheer stupidity or recklessness, decide it wrongly; and there are reasons why the question should be a very difficult one for even the wisest foresight to decide. One of these is the fact that it is not a matter of mere figures. It involves the indeterminate problem of the comparative value of human life and material wealth with all its incidents, a problem which—men will not be able to determine till the harmony between the feelings and the intellect is complete. We cannot determine generally how much pain is worse than death; and it is only beginning to dawn upon mankind that there can possibly be a question between the comparative duty of preserving weak lives at the cost of general deterioration of physique, and the attainment of general physical improvement by their sacrifice.

As regards the other mode of precaution, it must be remembered that, for importation to be an efficient means of preventing famine, it is indispensable that there should not prevail too wide a disparity between the prices of food at home and at the places from which it has to be imported. If this disparity approaches in magnitude the difference between normal and famine prices in the home market, it is obvious that the remedy is available only after much of the mischief of famine has ceased to be susceptible of remedy. It is generally only after a country has been brought by long continued trade into such a relation with its neighbours that the normal values of food on either side are already nearly approximated, that the possibility of preventing at least the earlier stages of famine by importation arises. Such a state of things cannot usually be

arrived at suddenly ; and, whenever it is arrived at so suddenly that the necessary processes of adaptation have not had time to take place, the inconvenience caused is comparable with that occasioned by famine itself.

So far we have been considering the causes of famine generally. Let us now take the special case of India.

\*Almost every great famine in India—and when we speak of great famines, we mean famines at once intense and widespread,—has, there is good reason to believe, been the result of drought. Only one great Indian famine of which we have any record has been generally attributed to any other cause. This is the famine which occurred in the year 1345, during the reign of Muhammad Tughlak. Mr. Girdlestone, in his Report on the past Famines of the North Western Provinces says regarding this event : “The constant expeditions which this monarch undertook in order to put down rebellion in distant provinces, and the magnificent ideas which he conceived of conquering Khorasan, and even China, necessarily led to increased taxation throughout his dominions, and caused men to be pressed for the army who would otherwise have remained peaceful tillers of the soil. Not content, too, with this drain on the agricultural population, he on more than one occasion ordered out troops as though for a wild beast chase, but really with a view to kill unfortunate villagers, whose only fault was that they could not satisfy his arbitrary demands. Even now his name is better known for the massacre of unoffending men at Kanauj, than for those wonderful talents and accomplishments which were almost unique in the days when he lived.—A long series of oppressions ended, as it might be expected that they would end, in widespread distress. The peasants fled from their houses and resorted to the jungles in despair. Many adopted a career of plunder ; many more died through sheer starvation. To make matters worse, the calamity which man’s violence had originated, *was enhanced by unfavourable seasons.* There were neither labourers nor cattle enough to ensure a sufficiency of food, *and the few crops that were sown failed for want of rain.*”

Even in this case, we thus see, it is admitted that want of rain had something to do with the famine ; and we suspect that, notwithstanding Tughlak’s military expeditions and tyrannical acts, there would have been no really widespread mortality from want of food, but for this untoward meteorological condition. An army may leave famine in its march, but it must be an enormous army whose march is the cause of a famine extending “more or less over the whole of Hindustan,” while, as to the impressment of men for an expedition to China having seriously affected the harvest over so great an area, it is altogether incredible. No doubt, the misgovernment and oppression that marked Tughlak’s reign, were such as to



render the people wholly incapable of struggling against a scarcity of even moderate intensity. But, after all, the only year of his reign in which there is said to have been widespread famine, was 1345, while we are told that his expeditions and his tyrannies were "constant," and in this year 1345, it is admitted that there was a failure of the rain-fall. We are fairly justified, therefore, in concluding that even this famine was not an exception to the rule.

Colonel Baird Smith has, certainly, suggested that the great famine of 1769-70 was due to floods rather than to drought, but the evidence that this was not the case, and that the real cause was a failure of the rain-fall, very similar in its circumstances and incidence to that of 1873, is overwhelming. Indeed, it is we think, very doubtful whether the occurrence of a widespread famine from floods in India is physically possible, though extensive local failures of the crops from this cause are of not infrequent occurrence.

It may be accepted, then, as an established fact, that the only natural cause of deficient production which the people of this country have to fear, or, at all events, which it is worth their while to make special provision against, is drought. Irrigation works are consequently the only available means which they can usefully adopt of increasing the constancy of production.\*

Leaving the mode of providing funds for, of constructing, and of regulating such works as matters of administrative detail which hardly fall within the scope of our subject, we proceed to consider the conditions under which it is economically desirable that such a means of reducing the liability to famine should, or should not, be adopted in any particular district. For this purpose it is necessary that we should set out with a clear understanding of what economy comprehends; whether we shall take the ordinary commercial sense of the word, in which it is a matter of mere quantitative calculation of the total outgoings and the total incomings; or whether we shall take that wider and higher sense, in which the question of intensity comes into play, as well as that of quantity. In the former sense, expenditure is economical when the total of the returns exceeds the total of the disbursements; and all that it would be necessary to consider would be whether, on an average of all varieties of season, the increase of production from the works contemplated would counter-balance the cost of maintaining them, and the interest on the capital expended in their construction. In the latter sense, expenditure

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\* It is possible that a deeper system of cultivation might operate in the same direction. But for reasons into which we cannot now enter, we believe that, under existing circumstances, there are insurmountable obstacles to any great improvement in this respect.

may be economical, notwithstanding that the total of the disbursements exceeds the total of the returns. If such were not the case it would be wholly impossible to defend the principle of insurance, at least as at present practised, on grounds of economy; for the mere fact that it is to the advantage of the insurance offices to carry on their business, is a conclusive proof that the total of the payments made by the insurers exceeds that of the payments made to them. Yet as a matter of fact, there is no doubt that insurance at rates fairly remunerative to those who accept the risk, is true economy on the part of the insurers.

Let us examine for a moment the reason why this is so. The explanation is based on the fact that profits and losses are characterised by intensity as well as by quantity. On the one hand, it may be vastly more advantageous for a man to gain a hundred pounds in one year, even though he gain nothing in the next twenty-four years, than for him to gain five pounds a year for twenty-five successive years. On the other hand, it may be much less disastrous for a man to lose five pounds a year for twenty-five successive years, than for him to lose a hundred pounds in one year, even though he lose nothing in the next twenty-four years. The hundred pounds in the latter case may be the whole of his capital or stock-in-trade, and its loss may mean a life of poverty and pain, or even premature death; while the loss of a hundred and twenty-five pounds, in twenty five annual instalments of five pounds each, may not only involve no serious inconvenience to him, but may even be consistent with a gradual increase of his wealth.

This is not only the case with regard to the pecuniary outgoings and incomings of individuals; the principle is one which obtains throughout nature, and the importance of which increases in proportion as physiological considerations come into play. A certain amount of labour spread equally over seven days may be in a high degree healthful, while the same amount expended in a single day may be so injurious, that neither six days' rest, nor a lifelong rest, will repair the mischief; it may be absolutely destructive; or it may be impossible. A large amount of pain or privation may be endured during a long period in a diffuse form, while a tithe of the amount inflicted in a shorter period would be intolerable.

Now, the problem of the economy of expenditure on canals as a means of escaping famine, is one in which a multitude of physiological considerations come into play, and it is pre-eminently necessary that it should be regarded intensively as well as quantitatively. To mention only one of these considerations, which includes most of the others, it is infinitely better that a man should be a little hungry, and *a fortiori* that he should suffer less

urgent privations, every day for a year, than that he should be absolutely without food even for a single week. Then there is an important class of considerations, not altogether of a physiological character, but similar to those which render insurance against fire good economy, which make it advantageous for men to undergo a small annual sacrifice in order to escape a season of such severe need as a famine implies, even though the total of the annual sacrifices is greater, quantitatively considered, than the actual loss avoided, and though that loss would not be accompanied by sacrifice of life, or even severe physical suffering. For a large majority of those who have the means, or the credit, to tide over such a period in personal safety, come out of it with the savings of years utterly exhausted; with their jewels, their household goods, their implements, and perhaps their very cattle and seed grain, sold or consumed, or, in addition to all this, oppressed with a load of debt from which they may never recover. The result is that, in the place of a few years of moderate self-denial, they have to endure a life-time of poverty and distress. From the position of men of substance, they have sunk into that of beggars; from free men, they have been degraded into serfs. The effect of a season of famine on the country is thus not merely to entail on its population a certain amount of loss of life, or temporary suffering, but to thrust back its progress for an indefinite term of years; so that a succession of such seasons, even though occurring at considerable intervals, may be absolutely inhibitive of all general progress whatever. Whenever the deficiency is so great that the high prices do not compensate producers, a transfer of wealth takes place from them to the money-lending class, and where this transfer is effected through an increase in the debts of the former, the ultimate loss to them is immensely greater than the amount of borrowed money actually expended by them during the famine. All this is, it may be said, so obvious as to amount to truism. Yet it is by no means certain that it is sufficiently considered by the generality of people in practice. While the quantitative elements of such a problem as that of irrigation are easily appreciated, much more recondite reasoning is required in order fully to appreciate its intensive elements; and in this country it is evidently not to the mass of the people that its decision can be safely left.

As regards the need for irrigation, the lands which make up our Indian possessions may be broadly divided into three classes;—the first consisting of tracts of country in which the rain-fall is normally insufficient for successful cultivation; the second, of tracts in which the rainfall, though more frequently sufficient than not, is in a high degree precarious; and the third, of tracts in which it is generally abundant, and drought an exceptional occurrence. Taking

the Bengal Presidency, a considerable portion of the Panjáb may be fairly ranked in the first class. A part of the Panjáb, the North-Western Provinces, and, in a lower degree, Behar, may perhaps be placed in the second category ; while Lower Bengal belongs to the third.

In the first tract, where the yield is scanty or cultivation absent, the advantage of irrigation is obvious ; for, where the soil is not absolutely incapable of yielding a crop, the production is immediately increased by it to an extent more than sufficient to repay the cost. It is not, however, as has been already pointed out, in tracts of this description that irrigation is most needed, if it indeed it is needed at all, as a precaution against famine on the spot. For the production, though insufficient in amount, is comparatively constant ; and the population sparse in proportion. As a remunerative undertaking and a means of increasing the wealth of the people, irrigation is, nevertheless, under such circumstances, highly desirable ; and moreover, although not required to prevent famines on the spot, it may be very useful in helping to prevent, or mitigate famines elsewhere. For the increase in production, caused by it, at first far outstrips the growth of population, and leaves a surplus of grain for exportation.

In tracts of the second kind, irrigation may, or may not, be commercially economical, but is undoubtedly economical in the higher sense of the term we have described above. Whether the fact that it is so is apparent to the ordinary native mind, will depend upon whether the danger is sufficiently marked and frequent to impress a somewhat dull imagination, unaided by any great degree of foresight, or not.

In tracts of the third description, irrigation obviously cannot be economical in the commercial sense ; and the question whether it is so in any sense will generally be open to very grave doubt. In the face of such doubt, and of the dissatisfaction which any attempt to force irrigation works on the people would inevitably cause, the Government will, we think, act wisely in turning its attention rather to other means of precaution ; and, with so wide an area entirely under its control, if it does its duty fully in constructing irrigation works wherever, on a thorough and intelligent consideration of the case they appear beyond reasonable doubt to be economical, it may probably rely with perfect safety on the extension of trade between one part of its territories and another to prevent serious distress. We have very little hesitation in saying that, if an effective system of irrigation works existed throughout Upper India and Behar, wherever irrigation is even commercially economical, and if at the same time the means of communication were made thoroughly efficient, there need be no fear of famine resulting from any probable failure of the harvest in Bengal.

As regards the importation of grain from beyond the seas, the trade relations of India with other countries are such that this source of supply is not available till famine prices have already been reached. Importation from abroad cannot, therefore, under present conditions, unless through the intervention of Government and at enormous expense, be depended on to prevent distress, or to check merely high prices, but only to mitigate the extreme effects of famine. It is not part of our purpose here to discuss in detail the conditions through which India would have to pass before she could look to importations from other countries as the first resource for supplementing a deficiency in her own harvest. Attendant on these conditions, however, would be a gradual rise of prices through a series of years. She may be approaching such a time; but it is not so near that she can, in the meanwhile, afford to neglect other precautions, more within her control. Nor, as we have already remarked, is it a time which admits of being precipitated, for a very rapid fall in the purchasing power of money is as certainly attended with widespread distress and social disorganisation when brought about in the course of trade, as when caused by a temporary deficiency of production. Even the sudden opening up of an isolated country, when it leads to a large influx of the precious metals, may prove a source of great distress to a large class of the population. However this may be, the broad fact remains that, in the present state of things, India cannot look without for the means of preventing famine.

The present pressure has led to the revival of the antiquated proposition for establishing great public granaries as a precaution against famine. Believing, as we do, that the best granary India could have, would be a complete system of irrigation, even if confined to tracts in which it was plainly remunerative, we should dismiss the proposition as superfluous, if there were any prospect of such a system being soon in operation. Since, however, it will probably be long before this can be the case, it may be worth while to consider whether, in the meantime, the establishment of such granaries would be an advisable measure. To establish them for the purpose of selling the food to the general population in times of scarcity, would be open to all the objections we urge elsewhere against interference with prices. As, however, the Government has a perfect right to pay its own labourers in food, it might seem at first that these objections did not apply to granaries maintained solely for the purpose of such payments. Nor would they, if it were possible for Government to maintain large granaries without seriously interfering with trade. But this would not be possible, if for no other reason, because food grains cannot be stored for a series of years, and, in order to avoid the destruction of their contents, the Government would be compelled to

empty them periodically, and substitute new grain for old, an operation which could not, in any way that we see, be managed without perpetual interference with trade. Such constantly recurring interference would be even more mischievous than the comparatively rare interference which would result from Government coming into the market as a seller in a time of famine, regarding the effect of which we shall have more to say presently.

As regards the prevention of famine, then, we believe the true, and only safe, policy for the Government to pursue, lies in the construction of irrigation works, wherever the rain-fall is either normally deficient, or notably precarious; in the facilitation, to the utmost of its power, of internal communications; and in the promotion of trade, both internal and foreign, and the removal of all obstacles to its development in the shape of octroi duties, transit duties, export duties, and the like.

The second part of our subject concerns the means which Government should adopt to mitigate the effects of famine, when, unfortunately, it occurs.

Foremost among the measures liable to be pressed upon its attention for this purpose, is that of coercing the grain-merchant to dispose of his stocks at moderate prices, that is, at prices which would enable every one to keep up his ordinary consumption as long as possible during a period of deficient food-supply. The advocates of such interference misunderstand both the true significance of high prices and the position which the grain-merchant really occupies in the scheme of society.

The grain-merchant discharges, in effect, the function of a banker of food to the community at large. He takes over from the producers, directly or indirectly, the surplus of food beyond their immediate necessities, and he distributes that food to consumers as required. The terms, however, on which he does this, are not banker's terms. He is not paid by a fixed commission; but his remuneration consists in the difference between the rate at which he receives the food and that at which he dispenses it, the former being the lowest rate at which he can induce the producers to part with it; the latter the highest rate at which he can induce the consumers to take it. The rate at which he receives the food, is determined by the ratio which the probable quantity to be thus stored is estimated to bear to the probable total drawings of the community; the rate at which he dispenses it, by the ratio which the quantity actually stored is estimated, between the parties, to bear to these probable total drawings. So far as the grain-merchant is enabled to obtain a higher rate of remuneration than the mere interest on his capital and value of his labour, the advantage depends on the differing conditions under which these ratios are calculated on either occasion. If it were

equally within the power of all the parties, on both occasions, to calculate them exactly, no such additional remuneration would, at least in a state of free trade, be possible. It is this excess of profit which is said by the economists to be the merchant's compensation for the risks of the market.

Along with this function of food-banker, the grain-merchant discharges another important function, *viz.*, that of an agent for the interchange of commodities between different sections of the community. In both these capacities he is a valuable servant of the public, and the sole reason of his being regarded in a less favourable light, lies in the uncertainty of the scale on which he is remunerated, an uncertainty which places buyer and seller in every transaction in the position of mutual antagonists, the one striving to get as much, and the other to give as little, as possible. Though the excess of profit which we have described as being the merchant's compensation for the risks of the market, is at one time a greater, and at another time a less quantity; the average about which it oscillates, is an approximation to the true value of the risk due to really unavoidable uncertainty, and, so far as it exceeds that value, is due solely to the superior knowledge of future probabilities which the merchant possesses over those with whom he deals. The real uncertainty, however, and, consequently, the true value of the risk represented by it, itself varies according to the conditions under which trade is carried on at a given place and time, being greater in proportion as the machinery for ascertaining and making known the amount of production and of stocks, and the state of the markets, actual and prospective, is imperfect, and less in proportion as that machinery is perfect. Any real improvement in the machinery in question is, therefore, in effect, tantamount to a proportionate cheapening of commodities; and to facilitate such an improvement, by every legitimate means in its power, is consequently one of the most important functions of Government.

The light in which the grain-merchant is regarded by the people, varies very much as the prices of his goods vary. When they are not sensibly above the average, he is looked upon as at all events a harmless individual. When they are so high as to produce more than ordinary inconvenience, he is regarded with suspicion; while, should they unfortunately reach [famine height, instead of being blessed as a friend, he is execrated as an enemy of mankind.

It is commonly supposed that the higher prices, the greater the merchant's profits; and, in a season of scarcity or famine, the cry goes abroad, not merely that his profits are enormous, but that his cupidity is the principal cause of the surrounding distress. It is, however, by no means necessarily true that a season of famine is a season of unusually large profits to the

grain-merchant. Extraordinary losses and extraordinary gains depend alike upon *extraordinary uncertainty* in the course of prices. If, at the time when the grain-merchant contracts for, or lays in, his stocks, the means of accurately forecasting the range of prices exists, and is equally available to both merchant and producer, the extraordinary profit, so far as such profit may be possible, will accrue chiefly to the producer, rather than to the merchant; and, if, owing to the absence of such means, it is shared in, or monopolised by, the latter, it is at the expense of the producer rather than of the consumer. In practice, no doubt, the grain-merchant does generally make a greater profit in a season of dearth, than in a season of plenty, because, when the deficiency in the supply reaches a certain point, prices rise in a ratio so much higher as to outstrip all previous calculation; and of so much of the rise as has not been previously calculated, he gets the whole profit. In this country, no doubt, the relations between producer and merchant are complicated by the fact that the former is generally to a certain extent in the power of the latter, and that his needs and obligations prevent the possibility of his taking full advantage of any knowledge he may possess of the prospects of the season. But it is the proportion in which the profit is shared between the merchant and the producer, not the price to the consumer, that is affected by the circumstance.

Another ground of the ill-feeling towards the grain-merchant that is engendered in a time of scarcity, is the belief that he raises prices, and thus aggravates the prevailing distress, by holding over longer than he otherwise would hold over. As regards the raising of prices, this belief is, no doubt, a just one; but, as regards the aggravation of the distress occasioned thereby, it is, in ninety-nine cases out of a hundred, untrue. If the merchant does not hold over to a greater extent than is necessary to equalise the consumption, and thus eke out the food-supply, through the period of scarcity, it is evident that he does not aggravate the distress, but the contrary. For, though he is the cause of the effects of the scarcity being sooner felt, he guards the community against the fatal results of a total failure of the food-supply at a later period. If, on the other hand, he holds over to a greater extent than that indicated, he does so at the ultimate sacrifice of his own interests; for the result in that case must be, sooner or later, a revulsion of prices, and he finds that he would have made more by selling, than he has done by holding over. That he should occasionally err in this way, is inevitable; but, when he does so, it is a mere accidental result of a policy which, on the whole, operates to the advantage of the public. It might, moreover, be urged, that, even if the merchant does realise a higher rate of profit in a season of scarcity, and



that, too, at the expense of the consumer, this is no more than he is fairly entitled to on the principle that, the greater the magnitude of the service performed, the greater is its money value.

The primary cause of the irritation which, owing to a fallacious process of reasoning, comes to be vented in ill-feeling, and not unfrequently in overt violence, against the grain-merchant, is, of course, the pressure of high prices, untempered as it is by an intelligent appreciation of their real significance and effect.

We lack the special experience which would enable us to say whether or not the crew or passengers of a ship at sea, when prudently put upon half rations, entertain any feeling of irritation against the captain from whom the order emanates; but we suspect, from what we know of human use in general, that the usual tendency on such occasions is to feel that at least the captain is acting prematurely; and the inevitable consequence of such a feeling would be dissatisfaction, varying in intensity with the extent of the privation and the amount of the inconvenience suffered. We have no doubt, however, arguing on the same premises, that, in the absence of a controlling authority of some kind, the majority of the crew or passengers in nine cases out of ten, would not adopt a similar precautionary measure of their own accord until it was too late; if, indeed, they would not, with a full consciousness of the danger they were incurring, prefer to accept the risk of exhausting their stock before the end of the voyage, rather than endure for any length of time the pangs of present hunger.

Now, the position of a country that cannot import food, is, during a season of famine, very much like that of a ship at sea which has run short of provisions, and high prices do in the one case what the authority of the captain does in the other, *i.e.*, they equalise the consumption of the food-supply, and prevent its complete exhaustion, during the continuance of the necessity. And they do this, as no other means could do it.

There are two reasons why it is futile to expect that people will, of their own accord, and without the pressure of immediate necessity, contract their consumption of food so as to produce the same economising effect. The first of these reasons is their want of the requisite knowledge, or, if they possess the knowledge in a dim sort of way, the want of such a definite and forcible belief as shall work their imaginations up to the requisite pitch of apprehension. One of the chief indications of a scarcity is, indeed, for the mass of the people, these very high prices themselves. Even during their prevalence, there is, as we have already shown, a strong and general tendency to discredit their necessity;—to believe that things are not so bad as they are made out to be, or as to justify exceptional dearth. It is in the highest degree improbable,

then, that, without this indication, people would realise the magnitude of the impending calamity with such force as to inflict on themselves the very inconvenience which they regard as a serious grievance when caused by high prices.

The other reason is the enormous difficulty, with most people, of subordinating present desires to future necessities. This difficulty is far from being a merely factitious, or a captious one. To inhibit a present desire from developing itself into volition, involves an expenditure of nerve force of a most exhaustive kind, and the maintenance of an emotional conflict which is in itself most really painful, altogether apart from the pain of the mere privation undergone. It requires long discipline and great fortitude to exert such a controlling power over even ordinary desires,—over those in which the object is to procure pleasure, rather than to escape actual pain. But the desire to satisfy the cravings of hunger is no ordinary desire. It is a desire to escape actual pain of a most distressing character; and it may well be doubted whether more than a very small majority of mankind, with food at their command, would be capable of restraining the impulse to gratify it, for any length of time, for the sake of a remote contingency.

However this may be, it is certain that, in practice, the degree of apprehension created by a knowledge of a failure of the harvest is not sufficient to induce hungry people to refuse cheap food.

There is no power in the country, like that of a captain in a ship, to take the distribution of the food-supply under its own charge. The Government, if it had the power, possesses neither the knowledge, nor the machinery, necessary for such a purpose. High prices alone—the natural out-come of free trade—are capable of exerting the requisite control over consumption.

It follows that any attempt on the part of the Government to interfere with the natural course of prices must be mischievous, and, in proportion as it is successful, is liable to be disastrous in its effects; and this is true not only of direct interference, by fixing prices, but, in all but exceptional cases, of indirect interference, by entering into competition with private traders in the importation and sale of grain. It may, perhaps, be urged that, if the Government acts on the ordinary principles of private trade, nothing but good can result from its interference, since prices are, in that case, lowered only through the effect of a real increase in the food-supply. If the effect of the Government engaging in trade were the same as that of an extension of the machinery of private commerce, this would, no doubt, be true. But, in practice, the spectacle of Government thus occupying itself creates an impression out of all proportion to the magni-

tude, not only of its actual, but of its possible operations. The moment that Government begins placing grain in the market for sale, or importing it with the object, real or apparent, of so placing it, private traders, no matter how insignificant may be the actual extent of its interference, are immediately led to contract or suspend their operations, under the apprehension of a degree of competition wholly beyond their power to contend against. The Government is, in fact, at once credited with the intention of doing all that the merchants believe it to be capable of doing; and as they form an extravagant notion of the extent of its capability in the matter, they conclude that they must be inevitably crushed by so formidable a competitor, and retire from the field to avoid absolute ruin, or serious loss. As what the Government can really accomplish, is, however, at the best, utterly insignificant compared with the total of what the grain-merchants could have accomplished, the country thus driven to lean entirely upon it, will find that it is leaning on a straw. This argument against interference depends, of course, for its validity on the assumption that the distressed district is accessible to the operations of the private trader, and that no peculiar circumstances are at work to keep him out of the market.

The *Indian Economist*, whose opinions on matters of this kind, though not invariably sound, are entitled to consideration, has, indeed, attempted to show that high prices in the earlier period of a famine are especially mischievous, and, in somewhat vague language, urges the importance of endeavouring to keep them down. The *Englishman* not only contests the accuracy of this view of the case, the grounds of which are not distinctly stated by the *Economist*, but maintains broadly that, since the more completely prices are equalised throughout the season, the less disastrous the result is likely to be, the sooner they rise the better. In reply to the latter view, and in defence of that of the *Economist*, the *Indian Statesman* contends that high prices at the commencement of the scarcity are inoperative as a means of reducing consumption, while, on the other hand, they lead to the early exhaustion of the pecuniary means of consumers. His argument is, that, so long as people have money, they, not being philosophers, will buy as much food as they can with it, up to their usual quantity, no matter how high the prices are. This is, no doubt, perfectly true; indeed, it is the very argument we ourselves have just been using to prove the necessity of high prices; but the conclusion derived from it by the *Statesman* is erroneous.

The population of the country may be divided roughly into three classes; a small class who are wealthy enough to waste food in ordinary times; a considerable class who could, in ordinary times, buy more food than they do, but yet live economically, and a

very large majority who live literally from hand to mouth, and who, even in ordinary seasons, spend upon food all the money they have available for the purpose. The effect of high prices on the first of these classes is probably to diminish waste, which to all intents and purposes is consumption ; and if, by and by, it causes them to increase their expenditure, there is but little fear of their means being exhausted. The second class, no doubt, adopt the course described by the *Statesman*, that is, they increase their expenditure, and incur the risk of exhausting their means, rather than reduce their consumption ; but the third, and, so far as the point at issue is concerned, much the most important class, do not adopt this course, simply because they cannot. Their means of purchasing food are not so elastic as the *Statesman* assumes. They have no store of money laid by, out of which they can provide for an extraordinary expenditure on food, and their daily or monthly earnings furnish little or no margin for the purpose. They *must* meet the high prices by reducing their consumption, because they have not the money to purchase the same quantity of food as before. Their means, moreover, are not exhausted, for the simple reason that they have no accumulated means to exhaust.

At the same time it must be admitted that one of the results of high prices is to cut off the means of a large number of this class by diminishing the labour fund from which their wages come. The second class referred to, by whom they are chiefly employed, being compelled to expend more on their own food, have less left to disburse in the payment of wages to others, and the consequence is that the demand for labour falls off at the very time when, in order that the increased cost of the necessaries of life may be met, it should rise.

This brings us to a most important point in the matter under discussion. Though high prices are the means by which, operating through the selfish instincts of those who perform the function of food-bankers for the community, a scarcity of food compels that subordination of present desires to future exigences which alone can prevent its being needlessly destructive, they produce this effect in a very unequal manner. The reduction of consumption which they cause instead of taking place all round, falls entirely on the poorer classes. The sacrifice by which the food-supply of the country is economised, is exacted wholly from those who are least able to bear it ; least able both because their consumption is always at a minimum, and because they are the class who, being compelled to labour, are least capable of moderating the physical need for food. Here it is that, after prices have reached a certain height, it becomes the duty of Government to step in. The ground of this duty, however, is not any obligation to secure an equal distribution of the food-supply ; for the

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principle of such equal distribution, pursued to its legitimate conclusions, would lead to communism in its most unqualified form. The ground of the duty, is the obligation Government lies under, to save its subjects from avoidable death or disease, and the extent of its interference should be limited strictly by this consideration. Even so limited, the duty is one which, in a time of severe famine, is liable to prove most onerous.

It is satisfactory to observe that the action of the Government on the present occasion, as it was on that of the last great famine in the North-Western Provinces, has been strictly in accordance with the principles we are here insisting upon. In spite of a great deal of very ignorant clamour, it has resolutely abstained from all interference with the prices of food, either directly, by authoritatively fixing them, or indirectly, by entering into competition with the grain-merchant. Still less has it shown any disposition to act on the communistic principle of equal distribution, to do which it would be necessary for it to take possession of all the grain in the country, and ration the population. Cautious as its policy has been, however, it has not altogether escaped accidentally impeding the operations of the private trader; for its importation of grain into certain districts, though merely for the purpose of paying the wages of its own labourers, is reported to have had for a time a discouraging effect on the importations of the merchants. The circumstance was as unavoidable as it is unfortunate; and it fully confirms all we have said about the danger of a greater degree of interference.

The nature of the duty which the Government has to perform, being thus plainly indicated, the next question that arises is, how it can perform this duty with the maximum of economy, as regards the ultimate financial result to itself, and the minimum of strain on the food-supply of the country.

There is an unfortunate tendency in some quarters to ignore the former consideration, and to argue as though it were a matter of little or no importance that the expenditure of Government on relief operations should be reproductive, provided only the immediate object of saving life be attained. Those who adopt this view, seem to forget two facts, the one, that, whatever the net cost of relief operations may be, though it may come in the first instance from the Government treasury, it must ultimately fall as a tax on the people; the other, that, to feed people without utilising the store of force so converted into physical energy, is as plainly waste as to consume so much coal in the furnace of a boiler without utilising the energy of the steam generated by the process. It is the loss, once and for ever, as far human uses are concerned, of all but a small residuum of the force represented by the food consumed; a wilful and absolute

annihilation of so much wealth. Indeed, it is open to doubt whether the saving of life and health thus effected would not be ~~let~~ rather apparent than real; whether the loss of wealth involved would not mean ultimately an equivalent loss of life or health, which, though, owing to its being spread over a longer period, it would be less obvious and, it may be, less intensely mischievous, would be equally real with the immediate loss of life and health prevented.

The duty of Government to guard against its relief-expenditure being non-productive is thus as obvious as its duty to save life; and the realisation of this condition is to a certain extent facilitated by the mode in which the distress caused by a scarcity comes about. The people most liable to be thrown on its hands consist in the main of the labouring class, with a sprinkling, on the one hand, of the improvident members of classes higher in the social scale, and, on the other, of the old and infirm poor. The only relief which will meet the case of the last of these classes is charitable relief. In ordinary times they are a burthen which humanity requires the community to bear, but nevertheless, economically considered, a burthen pure and simple. Famine, or no famine, no production of any importance can be got out of them. As regards them, the one object of Government interference is to save life and prevent pain; and all it has to consider, is how this can be most completely effected.

As regards the most numerous of the classes named, it is otherwise. The cause of their being thrown upon the hands of the Government is two-fold. On the one hand the rate of wages is no longer sufficient to furnish them with the necessaries of life; on the other hand the demand for labour is seriously diminished. Inability to labour is not part of the cause. The obvious course for the Government to pursue is, therefore, to supply this class with labour, and it follows from what we have just said that it lies under the severest obligation to see that, as far as possible, this labour shall be of a reproductive character; while the more immediately reproductive it is, the more appropriate it is likely to be to the occasion. Labour imposed for labour's sake is but little, if at all, preferable to idleness. Indeed, in one respect it is worse, since labour increases the quantity of food a man requires. Labour expended on works which are unlikely to be continued to completion, after the famine has passed away, and which must therefore prove abortive, comes under the same category. Labour spent on works calculated to be only remotely useful, does not fully meet the necessities of the case.

It is open, we think, to serious doubt whether a considerable roportion of the works which are undertaken by the Govern-

ment on occasions like the present, do not fall within the last two descriptions. The scale of expenditure appropriate to a season of famine cannot be kept up in succeeding years; and, unless the works commenced have been very carefully considered, the chances are that many of them have subsequently, on financial grounds, to be abandoned in an unfinished state, and either remain mere curious monuments of a great famine, or, if at any subsequent period they are resumed, are found to have become so far impaired, as to need re-construction. Other works, again, are of doubtful or remote utility; and the expense incurred in them afterwards prevents the execution of works which, being more immediately needed, should have been preferred.

Moreover, while these works are being executed, there remains, unperformed, or inefficiently performed, throughout the famine districts, a labour which is of more urgent importance than perhaps any great public work that could be devised. The very circumstances which cast upon Government the burthen of finding employment for starving multitudes, are leading at the same time to a partial suspension of that agricultural labour on which the ensuing harvest depends. The labourers who flock to the relief works are, at least during a considerable portion of the famine period, set free from agricultural labour only by the inability of the ryots to expend the same sum as usual in paying them, and the inevitable result is that the work of cultivation is neglected, or inefficiently performed. Now, it seems very questionable whether the money which the Government proposes to spend in relief works of a special character, would not be better spent in preventing this diversion of labour from its ordinary occupations, than in encouraging it;—whether, in fact, there is not a great deal to be done in the fields themselves, which should take precedence of non-agricultural and remote works, and the suspension of which Government might interfere to oblate with a maximum of advantage to the country, and a minimum of distress to the people employed.

The cost of such labour, which would be eminently and immediately reproductive, would be recoverable in the ensuing year from the ryots at whose disposal it might have been placed. The difficulties which the organisation of such a scheme would present, do not appear to be very formidable. Two modes of operation occur to us. The scheme might be carried out through a system of advances to the ryots: but there would be serious risk of these advances being misapplied; and the system would be open to other formidable abuses. The other plan would be to tell off to the ryots, through trustworthy agents appointed for the purpose, such number of labourers as each decided that he could advantageously employ in his fields, the daily payments being made by the agents

in question and debited to the ryots. Supervision of the actual work would be unnecessary, as the ryots, knowing that they had to pay for the labour, would themselves be efficient supervisors.

All work of this kind having been provided for, any surplus of labour that remained, might be employed upon works of a more special character. But, even as regards such works, it strikes us that the village should be preferred to distant localities; agricultural to non-agricultural, and immediately reproductive to remotely reproductive undertakings.

All risk of the distress of one season prejudicially affecting the prospects of the next, would thus be avoided; while such a system would possess the additional advantage of bringing relief home to every one; of spreading it over the greatest possible area; of obviating the necessity for long journeys, which themselves represent either physical distress, or extra food expenditure; of involving the least possible risk of waste, and of creating a minimum of disturbance and excitement.

We come next to the question of the mode of payment of the labourers employed by Government.

It is self-evident that no mere expenditure of money by the Government in a famine-stricken district can either add one iota to its food-supply, or increase the number of mouths that supply is capable of feeding. Scarcely less obvious is it that any addition to the purchasing power of the people of such a district, if unaccompanied by an equivalent addition to its food-supply, must tend to raise prices. When, therefore, the Government distributes money in such a district, either in the shape of alms to the indigent, whose first need is food, or in the shape of wages to the unemployed, who are in a similar condition, though it thereby benefits the immediate recipients, it does so only so far as it injures the remainder of the population. It is true that in this there is no injustice, but the contrary, for its effect is to compel a more equal division of the existing food-supply; and, if the food-supply could not by any possibility be increased, it might be clearly better for the Government to adopt such a course, than to fold its hands while a portion of the population perished of hunger. This would be the case provided the food-supply were sufficient to keep all alive; but it is quite possible to conceive the supply so far deficient, that an equal division would mean the death of all, instead of only a few.

It is evident, however, that such a mode of relief does not, in any case, go to the root of the evil, which is the deficiency in the food-supply itself; and, what is not, perhaps, so obvious, it tends constantly to increase the need for relief, and consequently to add to the magnitude of the burthen on the shoulders of the Government. The original cause of the failure of the demand for labour being the strain exerted by high prices on the resources of private



employers, every further rise of prices tends to a still further falling off in that demand, and a consequent fresh accession to the ranks of the unemployed. Every rupee, in short, that the Government spends in the cash payment of wages, adds in a certain degree to the amount it will ultimately have to so spend during the crisis. Humanity and economy, therefore, alike require that for every rupee the Government thus spends it should, if possible, add an equivalent quantity to the food-supply of the district in which the money is spent. Since, as we have already shown, the importation of food by the Government for the purpose of sale is productive of far more mischief than benefit, it follows that the only way in which it can unobjectionably fulfil this condition is by feeding its labourers, either directly or indirectly, with the food it imports. We believe that it should do this from the very first, unless trade is so active as to furnish an assurance that every rise in price will produce an immediate increase of private importations; for the very fact of relief operations being necessary, is a conclusive proof that the food-supply is actually deficient.

The rate at which the Government should pay its labourers is a more difficult question. Where serious distress has commenced in a district, it is probable that the rate of wages there will be abnormally depressed; and the question will arise whether the labourers employed on relief works should be paid at the prevailing depressed rates, or at the normal rates of the district. Humanity will naturally be inclined to see in the high prices of food a strong reason for liberality. On the other hand, if the rates paid on relief works are much more favourable than those obtainable from private employers, the result will be the still further diversion of labour from its ordinary occupations. Then, again, should prices continue to rise, a time will by and bye come, when the prevailing rate of wages will not suffice to furnish the labourer with the minimum quantity of the necessaries of life required to sustain him in health, and the Government will find itself equally bound in the interests of humanity and economy to see that its labourers are not underfed. The consequence will be that, as the distress increases, the effect of the relief works must tend to bring about the abandonment of all other unskilled labour; and this fact furnishes another potent reason in favour of the scheme of relief operations we have advocated above,—in favour, that is, of such a scheme as shall, as far as possible, operate to retain the labour of the country in its usual channels.

It may, perhaps, be objected to a scheme of this nature, that the difficulty of paying the labourers in kind would be greatly enhanced under it, as it is a much easier task for the Government to transport grain to a few central depôts than to distribute it village

by village. But we believe that the transport of grain from the central depôts to the villages would be found, in practice, to be a matter of altogether minor difficulty, since each village would readily furnish its own means of carriage.

We have adverted to the obligation of Government to provide for the aged and infirm poor, from whom no return in the shape of labour can be expected. The same reason holds good in favour of supplying them with food, rather than with money, as applies in the case of the labourers employed on relief-works. For the money expended affects prices equally, whether it is given away in charity, or paid in wages. Any attempt to relieve this class must, to be effective, be made near their homes; and the mortality which has taken place on former occasions in consequence of neglect of this principle, we believe to be enormous. To succour this class effectually, the Government should, in fact, have a supply of food available in every village in which private charity cannot be depended on to perform the work.

We have pointed out in the first part of our article, the objections that exist to the maintenance of great public granaries as a means of preventing famine. The same objections do not, however, apply to the maintenance in each village of a store of grain sufficient for the purpose of charitable distributions in seasons of extreme scarcity, for the simple reason that charity cannot, in any case, be a function of commerce. On the contrary, there are strong reasons in favour of the adoption of such a plan. In the first place, it is a matter of importance that every thing should be done, that legitimately can be done, to mitigate the pressure that must inevitably be put upon external sources of food-supply, and upon the means of utilising them promptly, in the event of a sudden scarcity; and it would be a sensible alleviation of this pressure, if the Government were relieved from the necessity of importing the food required for charitable distribution, by its existence beforehand on the spot. Then, again, it is plainly the duty of each village to provide for its own infirm. But even if it discharges this duty in ordinary seasons, it will almost certainly fail in it at a season when each one has enough to do to provide for himself, unless it maintains a permanent fund for the purpose. The alternative, in fact, lies between its leaving the burthen to be borne by the community at large during an emergency, and its making provision for bearing it beforehand. Such provision must be made either in money or in kind, and the same arguments tell in favour of its being made in kind, rather than in money, as tell in favour of the payments of wages on relief-works being so made. Economy also points in the same direction; for a maund of grain is a maund of grain at all times, while the price of a maund of grain in a season of

plenty may not suffice to purchase half that quantity in one of dearth.

Moreover, it is in strict accordance with the custom at every threshing floor in many parts of the country to set apart for charitable uses a certain small proportion of the grain threshed, the only difference between the plan actually pursued and that we here recommend, being that this grain is at present squandered in superstitious charity, instead of being collected and stored for a really beneficent purpose; for it goes to feed the idleness of the Brahman or the professional beggar, instead of the really infirm or honest poor. There would be no great hardship in imposing an additional tax of a few extra handfuls upon each ryot at harvest time, to be added to a reserve for the use of the infirm of the village on occasions when ordinary charity might be unequal to the demand on its resources. The non-existence of any poor-rate is sometimes brought forward as a reproach against the British Government in India, though it is extremely doubtful whether, as ordinarily administered, a poor rate is not rather a curse than a blessing to a country. But the kind of rate here proposed, reserved for occasions of the character we refer to, would be purely beneficial in its effect.

We have laid great stress above on the mischievous tendency of all interference on the part of Government with private trade, whether by fixing prices, or by entering into competition with the trader. There is another mode of operation, and one which has been adopted by the Bengal Government on the present occasion, the effect of which may be either to interfere with, or to further, legitimate commerce, according to the conditions under which it is carried out. We allude to the advance of money by Government to private individuals for the purpose of enabling them to engage in grain transactions. When capital is abundant, such advances are obviously unnecessary, and, as they are liable in any case to give rise to some mischief, if only by inducing inexperienced persons to attempt operations which they will probably bungle, are to be avoided. But it is quite possible that the capital in the hands of private traders may be so inadequate to an emergency of this kind as to make it necessary for the Government to come forward and assist them in the way referred to. When this is the case, it is important either that the assistance should be rendered very generally and impartially, or that it should be given on terms that will not put those receiving it in a position, as regards the cost of their operations, distinctly superior to that of men trading on their own capital. For if this precaution be neglected, the advantage conferred on certain individuals will enable them to overbid the rest of the grain-merchants, and thus unduly raise prices, on one side;

or to undersell them, and thus unduly lower prices, on the other, the effect in either case being to rob them of their legitimate profit, or to inflict loss on them, and thus lead them to restrict their operations. Such a course is, in fact, calculated to be but little less mischievous than direct competition by the Government itself. As it would be highly dangerous and inconvenient, if not impracticable, for the Government to cast advances of this kind broadcast over the country, it follows that, where it makes them, it should do so on ordinary commercial terms. On the same ground, we think, the Government should be very chary of advancing money for employment in grain transactions to others than traders, except for very special purposes, or where traders do not exist. No such objection, however, applies to advances for the construction of works, calculated to relieve a famine, which would not be undertaken without them.

The question of the suspension or remission of Government revenue demands, is one that requires the most careful deliberation. It must be remembered that the class upon whom such demands chiefly fall, are not generally the class most seriously affected by a scarcity. Up to a certain point a deficient crop is rather favourable to producers than otherwise, even in the district in which it occurs. On the other hand, it is quite possible that things may go beyond this point, and that there may be total failure, or the deficiency in the production may be so serious that no rise in price will suffice to compensate the producer. It is necessary to make sure that this point has been reached, before determining to grant suspensions or remissions which must weaken the resources of Government at a juncture when they are called upon to sustain unusual pressure. Outside the distressed tracts, producers get the benefit of high prices without any drawback, and, instead of having any claim on the Government for remissions, are better able to pay their revenue, or rents, than in ordinary seasons.

The last point we shall deal with is the vexed question of the prohibition of exports.

The question whether during a time of famine exportations should be prohibited either actually, by command, or virtually, by the imposition of a heavy duty, is a question between the comparative importance of immediate and temporary needs and future permanent interests? If the effect of the prohibition were merely to keep in the country a portion of the season's crop, which would otherwise be exported, no consideration either of the necessities of other countries, or of the loss and inconvenience to individual traders, would be a valid argument against its adoption. For, as regards the former, it is the duty of the Government to consider the necessities of its own subjects before those of other people,

even where the need is equally great on either side, and much more so, when, as would generally be the case at such a time, the need of its own subjects is the greater ; while, as regards the latter, it must, from the nature of the case, be easier to compensate traders for any such loss or inconvenience, than to import food, or compensate its subjects for the deprivation of it. If grain is being exported on the one hand, and imported on the other, an evident loss of power is the result, meaning certainly loss of money, and probably of time also, which on grounds of mere economy would be indefensible ; and if, as may very well happen, grain cannot be imported in time to make up for that exported, the mischief done by not interfering is irreparable.

But we have to look beyond this, before we can claim to have considered the question in all its bearings. A stoppage of the supplies of other countries generally involves a very serious risk of their revenging themselves by ceasing to take them in future. Even if the country adopting such a policy enjoys a natural monopoly of the grain exported, it is still by no means certain that it will escape this penalty. For the people whom it thus deprives of their usual supplies, may find that they can do very well without them, or with less of them ; or they may discover some substitute, equally or better adapted to their purposes, elsewhere. If, on the other hand, the article exported was one produced in other countries, the people cut off from their usual source of supply, will turn their attention to new sources, and the fresh direction thus given to the trade may become permanent. Latent powers of production, or competition, may be called into action in quarters where they were not suspected to exist. Thus the question of prohibiting exportation in one season involves, in a greater or less degree, that of the advantage of the exportation in any season.

A certain school of economists, we are aware, hold the opinion that, in the present state of Indian trade, every ton of rice that is exported from the country is so much wealth sacrificed, while the native mind finds no difficulty in attributing to her large exportations of this food-grain, the liability of India to famine. Among the various arguments that could be brought against this view of the case, we shall mention here only one, which seems very conclusive, but which we do not remember to have seen urged before. The notion that her annual exportations of rice increase the liability of India to scarcity, is based on the assumption that if they did not take place, so much more rice would remain in the country. But this assumption is a palpable fallacy. The truth is that if the grain now exported were not required for this purpose, it would not be produced. A people will not go on raising more of a crop than they can consume themselves and find a foreign market for. Take away the foreign market, and they will not produce more

than they can themselves consume. If more is produced, the fall in prices that will result will lead them to divert part of the land to the cultivation of some more profitable crop. Instead, then, of the liability of India to famine being increased, or her ability to meet it being impaired, by this export trade, the opposite is the case; and if her normal exportation were three million, instead of three hundred thousand, tons of rice, she would be better able to meet a famine than she now is; for the amount, whatever it is, is a surplus store, a certain portion of which every rise in price tends to divert from its foreign destination to her own use. If she were not in the habit of raising it for exportation, she would have no such surplus to draw upon in case of famine.

This fact furnishes an additional reason against hastily adopting, in a dear season, a measure which jeopardises the future of the export trade.

It is, of course, quite conceivable that the actual emergency may be so pressing as to render all more remote considerations of subordinate importance. But a prudent Government will be slow to adopt a course which nothing but extreme necessity can justify.

We have not space to discuss now, in all its bearings, the question of a bounty on importation, raised by Mr. Daniell's pamphlet. But if we are not mistaken, the *Englishman*, in its criticism of it, ignores one very important consideration. The writer in that journal says:—

“It is quite true that a bounty on grain places it in circumstances of special advantage; that the local cost of importation exceeds the net cost of carriage; and that traders will realise as fast as practicable, with a view to re-investing their money, and obtaining another bounty. But, with regard to the last statement, the rice-merchant will simply calculate whether, on the whole, it is more profitable for him to sell or to hold on the prospect of a further rise. The fact that he can bring his grain to market at, say, a rupee a maund less than in ordinary times, is a consideration in favour of rapid transactions, whether he saves that rupee in carriage, or gets it recouped to him by a bounty at the end of the journey. But the advantage of the plan of remitting it in carriage is that, if he need, in the first place, to pay it out, he will expect a profit on it, precisely as on any other rupee which enters into his gross outlay. So that, practically, a rupee remitted in the cost of carriage goes further than a rupee subsequently repaid to him. Whichever shape the transaction takes, it is equally a bounty; but with this difference, that a bounty granted in the form of a reduction of railway-rates is a more efficient one than the same amount recouped in money afterwards.”

This argument, no doubt, holds good of the transportation of grain already in India, from one part of the country to another, but it leaves untouched the case of importations of grain into India from other countries. Whether a bounty on such importations is desirable, or not, is a point we do not propose now to discuss, but it is evident that its place cannot be supplied by a reduction of railway rates.

JAMES W. FURRELL.

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## ART. XI.—THE RICE TRADE IN BENGAL.

SEVERAL questions connected with the scarcity and apprehended famine in Bengal are discussed in another article in this number of the *Calcutta Review*; and it is not proposed again to enter into any of the considerations of the present crisis, but merely to dwell on one statistical feature, the importance of which is made evident by the crisis, and has acquired an exceptional interest which in reality is as permanent as it is important. Much information on the subject of the internal traffic and distribution of rice in these provinces has already been obtained under recent orders of the Lieutenant-Governor of Bengal, and enquiries are still on foot, the full results of which have not yet been reaped. A thorough treatment of the question cannot be promised; but such facts and figures as are available and have been courteously placed at our disposal by the Bengal Government will be used.

It may be unnecessary to premise, what must be known to our readers, that rice is divided in Bengal into two distinct main crops, locally known as the *aoos* or early and the *amun* or winter rice. The early rice is mostly raised upon the high-level lands; it is sown with the first showers of the spring and gathered in July and August. It requires more attention in cultivation than the *amun*, and is more liable to failure from the accidents of the seasons. It is not transplanted but reaped from where it is sown. The winter rice is of two principal varieties—one sown broadcast and the other transplanted. The transplanted variety is the commonest kind of rice in Bengal. In the first instance it is sown on high land. Afterwards, when the rain renders the soil sufficiently moist and the seedlings are about a foot high, they are transplanted to a more marshy soil which must be such as in the rains is covered with water. The rice grows in the water, knee or thigh deep. It is sown at the same time as the early rice, transplanted in August, and reaped in November, December and January. The winter rice, sown broadcast and not transplanted, is sown in deep marshes, and as the water rises, the rice grows with it and the stem at times attains the height of twelve or even twenty feet. Of all kinds of rice this is the most rapid in its growth, frequently shooting up twelve inches in twenty-four hours as the inundation rises. Some species of this rice are capable of bearing submersion for seven or eight days if the water which has risen suddenly be clear. If it be submerged in foul water the plant dies in a day or two. This description of winter rice is sown and reaped at the same time as the trans-



planted species. There is another principal kind of rice known as the *boro*, which is a spring crop raised in marshes and on low alluvial soil. This crop is reaped in April, May and June, and its success depends much on irrigation. Besides these descriptions of rice, there are innumerable minor varieties familiar to the peasantry, many of which are peculiar to particular localities.

Over the whole of the rice area of Bengal the winter rice is the principal crop, save in exceptional localities such as Nuddea where two-thirds of the rice lands are cultivated in *aoos* and one-third in *amun*, and in Moorshedabad where the *aoos* rice predominates in the eastern parts of the district. In all rice districts there is, however, an *aoos* cultivation, and in surplus districts this crop is usually consumed by the cultivators, leaving as much of the *amun* as possible for export. It may be said generally that five-sixths of the rice in Bengal is *amun*. The cultivation of *boro* rice is general, but it is not grown to a large extent in any district.

Rice is the principal article of diet over Bengal Proper, and, among Bengalees, is often the only food eaten; pulses, fish, vegetables, oil, salt, spices and other condiments are only added to give the rice a relish.

The districts of the whole of Bengal Proper, or the great alluvial and deltaic plain between the Himalayas and the Bay of Bengal, and of Orissa, or the diluvial territory between the hills and the sea connecting these provinces with Madras, a level area of nearly one hundred thousand square miles, uninterrupted by a single hill, rich in black mould and of boundless reproductive fertility, subject to recurrent inundation and enjoying natural facilities such as no other country in the world possesses for internal commerce and irrigation—constitute the great rice producing tract of Bengal which is ordinarily much more than self-supporting. In the autumn months the whole country seems sown with rice; the early crop stands thick and yellow on the high lands, while the lower grounds are waving with a wide and unbroken sea of green. The surplus produce of this area finds its way, generally speaking, to three great marts from which the rice trading operations of the province are conducted. The imports into Calcutta have to find food for the metropolis, for foreign exportation and for export up-country; Chittagong is the centre of a large and rapidly growing export trade by sea; Patna is the emporium of the trade for Behar and the North-Western Provinces.

The imports of rice into Calcutta in an ordinary year may be set down at about twenty millions of maunds or 714,285 tons; about ten millions of maunds are annually exported from Calcutta by sea; about seven millions are consumed by the metropolitan population, and it has been estimated that about three millions pass through Calcutta for up-country export.

The Financial Department of the Government of India has recently issued a table of "Statistics of the Export of Rice and Paddy from British India to foreign Countries for the 18 years ending with 1872-73," of which we republish the total quantities, though we confess we do not entirely trust the figures and would have preferred a comparative statement showing the total quantities of *Exports by Sea*. The return is, however, of interest as illustrating, first, the rapid increase of exportation which culminated in the year before the disastrous famine of 1865-66; and, secondly, the magnitude of the Exports from British Burmah, a country the rice resources of which seem almost boundless, and whence the Government relies largely for exports into Bengal during the present season.

*Statement of Export from British India to foreign countries from 1855-56 to 1872-73.*

YEARS.	QUANTITIES OF RICE AND PADDY COLLECTIVELY EXPORTED TO FOREIGN COUNTRIES FROM				
	BENGAL.	BOMBAY AND SINDH.	MADRAS.	BRITISH BURMAH.	TOTAL.
	Tons.	Tons.	Tons.	Tons.	Tons.
1855-56 ...	297,651	5,128	128,755	270,077	701,611
1856-57 ...	302,613	5,085	121,888	158,997	588,583
1857-58 ...	290,056	6,774	130,575	344,489	771,894
1858-59 ...	169,473	2,503	87,897	190,337	450,210
1859-60 ...	165,082	1,656	105,848	127,508	400,094
1860-61 ...	251,680	5,571	133,203	218,586	609,040
1861-62 ...	342,315	3,932	77,484	264,200	687,931
1862-63 ...	376,394	5,508	62,698	268,759	713,359
1863-64 ...	399,741	882	72,168	341,906	814,697
1864-65 ...	404,609	977	71,089	424,859	901,534
1865-66 ...	256,346	749	65,410	373,509	696,014
1866-67 (eleven months.) ...	155,315	4,800	65,180	180,141	405,436
1867-68 ...	266,182	8,415	85,385	245,089	605,071
1868-69 ...	248,553	12,304	94,983	386,958	742,793
1869-70 ...	192,691	11,642	69,461	256,938	580,732
1870-71 ...	274,278	19,446	99,177	411,489	804,090
1871-72 ...	256,259	27,469	118,320	463,515	865,563
1872-73 ...	356,953	20,299	104,143	683,303	1,164,698

The actual exportation of rice by sea from Calcutta\* was 9,170,223 maunds or 339,657 tons in 1871-72, and 9,781,842 maunds or 362,489 tons in 1872-73. Of this amount the principal consignments were as follows:—

	1871-72.	1872-73.
	Maunds.	Maunds.
Great Britain ... ..	1,333,446	1,473,924
Bombay ... ..	2,668,154	1,886,945
Mauritius ... ..	1,720,060	2,633,285
Gulfs ... ..	1,221,574	936,666
China ... ..	457,022	189,115
Madras ... ..	141,138	346,752
Ceylon ... ..	288,573	741,789
Bourbon ... ..	249,035	140,575
Australia ... ..	134,698	121,329
Cape and St. Helena ... ..	53,954	152,200
West India Islands ... ..	.....	766,547
Batavia ... ..	.....	219,996
South America... ..	611,251	.....

It is not easy to calculate the actual consumption of rice in Calcutta. The population of the metropolis itself has been said to consist of not less than nine hundred thousand inhabitants, thus:—

Calcutta Proper ... ..	447,601
The Suburban Municipality ... ..	257,149
The Further Suburbs known as the North and South Suburban Towns ... ..	89,895
Howrah ... ..	97,784
Total ... ..	892,429

But it must be recognised that the towns of Serampore, Chinsurah, and Hooghly, and Barrackpore and Dum-Dum, all of them in the immediate vicinity of Calcutta, are practically outlying Suburbs; and that of the vast population of the districts of Hooghly and the 24-Pergunnahs a large part is in fact

\* These figures are derived from the Commercial Annual, or a Tabular Statement of the External Commerce of Bengal during the years 1871-72 and 1872-73; published by the Collector of Customs, p. 52. It is assumed that the figures are accurate, but the writer has tried to reconcile the totals with those published by the Government of India without success. The Financial Department figures give the whole exports

from Bengal at only tons 256,259 in 1871-72, and at tons 356,953 in 1872-73, an export confined "to foreign countries" it is true, but that expression is not sufficiently explained. If it includes all countries not under the Government of India and no other, the Government figures, allowing for the exports from Chittagong and Orissa, will not correspond with these given in the Collector of Customs' Statement.

connected with Calcutta. The census returns, which do not profess to give the floating population of the city, much understate the actual number of its inhabitants. Allowing for a metropolitan population of from a million to a million and a half of souls who are dependent for their support on the import of food grains into the city and its environs, and a daily consumption per head of three-quarters of a seer of rice or six maunds annually, the total annual consumption will approximate to the estimate we have accepted of seven million maunds.

It has been assumed that about three millions of maunds pass through Calcutta annually for up-country export, but no accurate information is available on this point. Although the exports by rail are small, not exceeding a few thousand maunds, the river traffic is known to be very large.

The largest share of the supply of rice for Calcutta is furnished by the littoral districts that fringe the Bay of Bengal. Between seven and eight million maunds are poured in annually through the Calcutta canals which connect the Soonderbuns, Backergunge, parts of Jessore, and the country about the Megna river with Calcutta. The imports into Calcutta of rice and paddy by the Calcutta canals during the years 1867-68 to 1871-72 are registered as follows :—

	Mds. of Rice.	Mds. of Paddy.
1867-68	... 9,384,050	... 492,155
1868-69	... 10,021,275	... 1,505,625
1869-70	... 3,306,800	... 920,275
1870-71	... 6,984,200	... 701,450
1871-72	... 5,514,673	... not specified.

The subjoined table shows the imports of rice into Calcutta by the canals during the year 1872-73 :—

<i>By the Circular Canal.</i>	<i>By Tolly's Nullah.</i>	<i>Total.</i>
Mds.	Mds.	Mds.
6,701,800	1,927,975	8,629,775

Besides rice there was an import of paddy or unhusked rice :—

<i>By the Circular Canal.</i>	<i>By Tolly's Nullah.</i>	<i>Total.</i>
Mds.	Mds.	Mds.
97,175	1,293,425	1,390,600

This supply was conveyed in 31,085 boat loads, and is registered from the districts of the 24-Pergunnahs, Jessore, Backergunge, Dacca, Sylhet, and Tipperah. It is a matter of regret that the Calcutta Canals returns do not at present show the places of shipment in detail, but arrangements have now been effected by Government for ascertaining the future transactions of all the large export marts, and for grouping the transactions of the smaller places together according to districts.

As might be expected, the 24-Pergunnahs district imports very largely into the metropolis. It is the practice to sell in Calcutta the produce of the immediate neighbourhood as soon as the harvest is over, and to supply the deficiency thus caused by importation from Midnapore and other districts. In other parts of the district which are easily accessible and very populous, such as Baraset, Dum-Dum, and Barrackpore, rice is imported from Calcutta. The Southern and Soonderbuns sub-divisions of the district, Basirhaut, Satkirah, and Barripore export largely, and their produce finds its way to Calcutta through the Canals. From Diamond Harbour the export is enormous: the Magistrate estimates it at 25 lakhs of maunds, though this is probably an exaggeration; and the bulk of it comes into Calcutta along the Hooghly or by road.

During the year 1872-73, 55,018 maunds of rice and 1,215 maunds of paddy were imported into Calcutta by the Port Canning Railway, all of which was derived from the same sources as supplied the canals with their traffic.

The imports of rice to Calcutta along the Eastern Bengal Railway of late years have been as follows:—

				Mds.
1868-69	...	...	...	299,313
1869-70	...	...	...	183,442
1870-71	...	...	...	113,521
1871-72	...	...	...	125,865
1872-73	...	...	...	814,277

It is satisfactory to note the increase in the traffic since the opening of the extension to Goalundo, but the quantity of food-grains carried by the railway always has been and is still very small. The supplies are received from Pubna, Furreedpore, Dinagepore and the Eastern districts.

The Soonderbuns of Jessore supply their quota to Calcutta, but the importation is less than it is from the 24-Pergunnahs or Backergunge. The northern parts of this district import largely from the South and the exports of this district by sea are considerable. 110,200 maunds were exported last season from Morrellgunge for the Mauritius and Ceylon.

Backergunge has the reputation of being the finest rice district in Bengal, and a very large proportion of its exports go to Calcutta. The rice is of superior quality and exported at once instead of being sold in the local markets. There are no data from which we can estimate the Calcutta import of rice from Backergunge, but it probably amounts to between two and three million maunds. Backergunge rice is also extensively imported into the neighbouring districts; the drain is so great and the demand for Backergunge rice so general that the district is compelled in some

measure to feed itself by importation which it derives from Sylhet, Dacca, Mymensingh, and Tipperah. This rice is imported during the rainy season, and the people of Backergunge are said to rely on this imported crop for their maintenance in the latter part of the autumn and for a portion of the cold weather as well. Fureedpore exports to Calcutta by river and by rail but not in large quantities. The northern part of this district is especially dependent on importation from the surrounding districts. Pubna also exports to Calcutta and it receives supplies in considerable quantities from Bogra, Rungpore, Mymensingh, Dacca, and Sylhet, chiefly for exportation, a small quantity only being retained for local consumption. This district is much more than self-supporting.

The great rice producing districts of the Rajshaye division export largely into Calcutta. The whole of Northern Bengal, which is now suffering so much from short crops, in ordinary years has an enormous surplus produce. From the district of Dinagepore alone, which has been described as one huge rice field, a million and half of maunds were last year exported down the Attrai river to Calcutta through the Matabhanga river. The exports from the marts on the Attrai river in Dinagepore find their way to Calcutta; those from the marts on the Poornabubha, Kooleck and Tangun in the same district are sent up-country. The principal figures of rice export from the marts on the Attrai river during 1872 have been reported by the Collector:—

				Maunds.
Patiram	...	...	...	159,082
Koomargunge	...	...	...	162,361
Jeebun Bazaar	...	..	...	128,200
Fakeergunge	...	...	...	110,599
Chandgunge	...	...	...	84,608
Balooghat	..	...	...	81,937
Kalleegunge	...	...	...	80,000
Chuck Gopal	...	...	...	76,078
Rungamuttee	...	...	...	80,580
Paglee Bunder	...	...	...	74,531
Sumjheea	...	...	...	57,541
Brohinopore	...	...	...	37,001
Moheepore	...	...	...	22,137
Kenchun	...	...	...	18,000
Sahebgunge	...	...	...	4,500
				<hr/>
				1,177,155

These fifteen marts are all on a portion of the Attrai river not more than 60 miles in extent in the district of Dinagepore, and according to the merchants' own books have exported these amounts

to Calcutta; and this does not take into consideration other very large rice marts in the Dinagepore, district, such as Khansama, Bhooshee, Sheebgunge, Mahadebpore and many smaller places which all export to Calcutta. The Bogra district is said to import into Calcutta about six hundred thousand maunds annually. The two great rice marts of this district are Hillee and Dupchanchia, which evenly divide the traffic. Hillee is situated on the river Jumona; Dupchanchia on the western bank of the Nagar, a branch of the Karatia river. The latter mart exports the rice crops of the Adamdighee tract which produces some of the best rice in Bengal, and where in 1872 the produce was so bountiful that rice was suffered to ripen and wither away uncut, because sufficient labour could not be obtained to harvest it. The town of Hillee is to be a station, and has always been held to be an obligatory point on the Northern Bengal Railway, and Dupchanchia will be connected with the railway by a good feeder road which has already been taken in hand. There is a brisk importation down the Bhagiruttee river into Calcutta from the marts of Azeemgunge and Baloochur in the Moorshedabad district. The Rajshahye district exports little direct to Calcutta. It transmits, however, a good deal of rice into Moorshedabad which is locally consumed in the eastern parts of that district. A large export of rice leaves Rajshahye for up-country consumption. The district of Rungpore exports its immense surplus,—amounting to at least two or three millions of maunds,—to Dacca, Pubna and Fureedpore and also northwards into the Cooch Behar division. Of the supply sent down South a certain quantity finds its way to Calcutta, but the greater proportion is, it is believed, destined for the mofussil and up-country markets.

It is remarkable that Serajgunge, the commercial emporium of Pubna, Mymensingh, part of Bogra, Rungpore, and Dinagepore, and whence the annual exports are estimated to exceed a million sterling in value, does not export rice largely. The export to Calcutta does not exceed 35 or 40,000 maunds. It is principally the jute trade that has gained for Serajgunge its pre-eminence. At the same time the exports from Serajgunge northwards are considerable. Steamers belonging to European Companies carry rice from this mart for the Bengalee coolies who work in the tea producing districts, and generally Serajgunge exports rice northwards into Cooch Behar and the Assam province.

The Northern Bengal line of Railway from Kooshtea to Darjeeling which traverses a portion of Pubna, Rajshahye, Bogra, Dinagepore, and Rungpore will, when carried out, tend more than any thing else to develop the great resources of the districts of the Rajshahye division. From Rungpore it was last year (1872-73) reported by the Magistrate that the yield of rice was con-

sidered too good by the ryots as the prices were thereby kept down. The same was observed in Bograh; but these ideas will presumably cease to exist when there are additional means of exit for the superfluous produce.

The Eastern Bengal Railway, as we have seen, imports food-grains to a very small extent. The East India Railway has been equally unsuccessful in attracting this traffic, and in a favourable year does not import more than a million maunds of rice to Howrah. This amount was exceeded in 1871, but in 1872 the imports fell off considerably, and during the first-half of 1873 there was a further decrease. The greater part of this importation comes from the districts of Beerbhoom and Burdwan, and to some extent from Moorshedabad. The Hooghly district supplies no rice to Calcutta. There is a surplus cultivation of rice in the inland parts, but insufficient for the supply of the densely populated eastern Thannahs bordering on the Hooghly river, and large importations are always effected from Calcutta, and from the large river marts at Bhuddessur and Jhikrapoota in French Chandernagore, which are both within the district. The portion of imported rice from these marts to be consumed in the Hooghly district finds its way to Baboogunge, Boidyabatty, and Sooraphoollee markets. The rest is re-exported.

The Burdwan district exports to Calcutta. Considerable imports are received from Rungpore and Dinagepore, but the great proportion of this is passed on to Calcutta and a good deal into Nuddea. The east of Nuddea receives rice, though in small quantities, from Rungpore, Bogra, Dinagepore, Dacca, and other districts; and the west of Nuddea gets supplies from the large Burdwan marts of Cutwa and Culna. Nuddea does not, as a rule, export rice. Howrah imports on the whole, but chiefly from Midnapore and Balasore by land; the Shampore Thannah of this district produces rice of a fine quality which is exported to Howrah and Calcutta. Food is seldom, if ever, exported from Bancoorah, but in ordinary years sufficient is produced to support the inhabitants. When there is a succession of bad years rice is imported from Midnapore, Maunbhoom, and Baneegeunge. Beerbhoom exports largely. But the principal rice producing tract among the Western districts is Midnapore. It is estimated that about 2,000,000 acres of this district are sown with rice, and it is well known that the large rice fields of Hidgelee, and all the low lands east of the district, are among the most fertile in Bengal. The ordinary exports of this district are estimated by the Collector at 15,000,000 maunds, but it seems that the calculations by which this total has been arrived at are erroneous. At twelve maunds of rice an acre the whole district output would amount to 2½ million maunds. The population of the district is two and half-millions, and at a consumption of six maunds



annually per head they would consume 15 million maunds. Even this estimate would leave nine millions of maunds available for seed and exportation. Allowing two millions for waste and seed the available exports will be seven million maunds, and it must be admitted that this total is very large indeed. The great bulk of this finds its way to the metropolis along the Russulpore estuary and up the Hooghly in fleets of native boats. The irrigation canal from Ooleoberriah to Midnapore is now locked all along and it is hoped it will be navigable in future. Last year, 1872, it was in a very crippled state, but it took nearly four hundred thousand maunds of rice to Calcutta, and as the Russulpore route is very dangerous, and involves the inconvenience of waiting—even for weeks it is said—at the mouth of the estuary for favourable weather, no doubt exists that the canal traffic will much increase and be very profitable. The other great rice route from Midnapore is along the Grand Trunk Road inland. Exports follow this route into Howrah and Hooghly and into Bancoorah. The over-populated thannahs to the north-east of Midnapore also receive large imports, calculated by the Collector to exceed a million and-a-half of maunds, from the central and north-western parts of the district. Ghatal, to the north of the district, is at the present time a remarkable commercial centre for the exports and imports which find their way up the the Roopnarain river to that part of the country.

It remains to indicate the supplies derivable from Orissa. The sea exports from Cuttack, Pooree and Balasore to foreign countries and British Indian ports beyond the Bengal Presidency as obtained from the Collector of Customs in Calcutta, in 1872-73, were as follows :—

Whither Exported.	CUTTACK, maunds.	POOREE, maunds.	BALASORE, maunds.	TOTAL MAUNDS.
To foreign countries ...	8,736	6,286	8,667½	23,689½
To British Indian Ports beyond the Bengal Pre- sidency ...	91,396	137,950	185,262½	414,608½
Total ...	100,132	144,236	193,550	438,298

but it must be remembered that these figures do not include the exports to Calcutta or to any other port within the Bengal Presidency.

The present Collector of Balasore reports of his district :—

“Balasore is a rice-exporting district, and exports both by sea and land. Export by sea takes place from seven different ports situated on the coast between the Sooburnorekha and Byturnee

rivers, from which rice is carried to Calcutta and the Madras ports, and in smaller quantities to Ceylon, the Maldives and Laccadives. The following figures show the quantities of rice annually exported by sea since the famine :—

				Mds.
1868-69	...	...	...	128,000
1869-70	...	...	...	300,000
1870-71	...	...	...	400,000
1871-72	...	...	...	483,000
1872-33	...	...	...	403,000

“Exportation by land takes place northwards along the Trunk Road, but data as to its amount are not forthcoming; the rice is carried in carts and on pack bullocks; its destination is Midnapore, and even Raneegunge and Gurbetta.”

Upon the whole Mr. Norman considers that the Balasore exports of rice by sea and land together cannot be placed lower than twenty-two thousand tons or nearly 600,000 maunds annually. It is probable that about two hundred thousand maunds of this, or a third of the whole export, finds its way to Calcutta; nearly as much to the Madras and foreign ports, and the remainder inland.

There are considerable exports from Pooree and Cuttack also, although the exports to Calcutta are not so large as they are from Balasore. A good deal of rice leaves Pooree by land for Ganjam and Berhampore, and a larger proportion leaves these districts for the Madras ports than is exported thither from Balasore. The Telinga merchants export from Cuttack, from the ports of False Point, Muchgaon, Chandbally, and Damrah; the export of rice from False Point alone amounted to 91,344 maunds during 1872-73. The annual export from Pooree and Cuttack into Bengal is probably about fifty thousand maunds.

The total imports of the twenty millions of maunds which are annually consumed in Calcutta and its environs and exported from Calcutta may be summed up as follows :—

				Maunds.
By the Calcutta Canals	...	..	...	7,500,000
From the 24-Pergunnahs, and other neighbouring districts not by the Canal, and along the E. B. Railway, not shown elsewhere	...	...	...	2,500,000
From the Rajshahye Division not shown elsewhere	...	...	...	3,500,000
By the E. I. Railway, ditto	...	...	...	1,000,000
From the Burdwan Division, ditto, exclusive of Midnapore	..	...	..	2,000,000
From Midnapore	...	...	...	3,250,000
From Orissa	...	...	...	250,000
				<hr/>
				20,000,000

The second emporium of the Bengal rice trade is Chittagong. Mr. Hankey, the late Officiating Commissioner, has reported of the trade of this port as follows in his last Administration Report:—"In Chittagong the principal export trade is in rice, of which 2,823,255 maunds or 104,565 tons were exported last season, against 1,540,809 maunds or 57,069 tons in the previous year. This business has greatly increased of late years. It is chiefly in the hands of European merchants, but there are one or two native firms. The bulk of the rice comes from Tipperah, Noakhally (including the churs of Sundeeep, Hatia, &c.), and the island of Dukhin Shabazpore, which belongs to Backergunge. It is brought down by *beparis* in boats, and during the cold weather whole fleets of these may be seen making for the mouth of the Kurnafoolee from the northward. These *beparis* are not generally men of capital; they purchase rice in small quantities from the producers, and bring it down in their own boats. On arrival they deal with the merchants direct. Business is done to a certain extent through brokers, but under the immediate superintendence of the merchant, not as in Calcutta, where they employ *baniahs*.

"A little rice from the district of Chittagong itself is exported, but the merchants prefer the Tipperah and Noakhally grain, which, from the manner in which it is prepared, is better able to stand a sea-voyage." Chittagong rice is said, the Collector adds, "to be less carefully manipulated, and, being grown for eating purposes, is too expensive for export." Except in the south of the district, there is no very large surplus, production being not much more than sufficient for local consumption. A little rice is indeed imported into Chittagong for food, but the quantity is believed to be inconsiderable. What foreign rice does come to market is brought from the neighbouring districts of Tipperah and Noakhally, and occasionally from Arracan.

The Commissioner continues:—"The ships that take away the rice from Chittagong are generally European or American. They either come in ballast or bring salt from Liverpool. A few bring earth-oil, and sometimes timber (to order) from Rangoon. The rice is sent to Galle, Colombo, Cochin, Bombay, and other Indian ports. It also goes to the Mauritius. During the past season 453,376 maunds of rice were exported to the Mauritius. No rice has been sent to Europe during the last two years, as Chittagong cannot compete with Calcutta as regards freight, nor with Burmah as regards cost of rice."

The district of Noakhally besides exporting rice to Chittagong, exports also to Calcutta and Dacca, and Akyab and Rangoon. Tipperah is a very large rice producing district and it is estimated that its exports are not less than four millions of maunds annually.

The bulk of it is said to go to Naraingunge in Dacca for Western export. It is also exported to Fureedpore, Pubna, and one or two other districts. A small quantity finds its way in to the Frontier Hill States. The rice from the south-east of the district which has no water communication with the westward is carried to Chittagong by boat and absorbed in the export trade there. Sylhet is also essentially an exporting district. The surplus produce finds its way principally north to the Assam tea districts and east into Cachar, and this district adds also to the quota that is supplied for the consumption South and West by the fertile rice fields of the Dacca division. Cachar is said to import between two and three hundred thousand maunds from Sylhet. The rice export from Mymensingh is estimated by the Collector at about 2,763,500 maunds. From the east of the district it is exported to Dacca and is absorbed in the convoys of boats carrying rice to Calcutta and the up-country markets. From the north it is exported to Assam. There are always very large imports into the district of Dacca. It is calculated that the populous sub-division of Moonsheegunge, where the inhabitants average 1,031 souls to the square mile, imports at least a million and a half of maunds for its own consumption. This supply comes from Backergunge, Mymensingh, Tipperah and Sylhet in the order given. The rest of the district is self-supporting and much of it exports, but not to any considerable extent. The rivers of the Dacca district are great channels of exportation and much rice from Eastern Bengal passes through this district and is re-exported at its marts for consumption up-country.

The province of Assam does not usually export or import rice largely, but the tendency is to import. The tea factory labourers are dependent on imported food which is mostly brought into the country by the river steamers from Serajgunge and Dacca. The coolies, Bengalees, and other foreign residents in Assam all consume imported rice, but this is due, not so much to the circumstance that a sufficient quantity of rice is not raised in the province, as to the existence of a prejudice, or, as the Commissioner says it may be, "a well-founded objection, derived from experience," against the use of Assamese rice by any but native-born Assamese. There is also a steady import into Assam from Goalparah. The dealers of Goalparah recently gave in returns to show that over 500,000 maunds of rice were imported from Bengal into that district, and no doubt nearly the whole of this passes on into Assam. The import into the tea districts of the province may probably decrease in time and as cultivation spreads, but at present it is probably not much short of three quarters of a million maunds. Among the mountainous tracts, the Khassiah Hills import largely. The supply is derived from, Mymensingh

and Sylhet, and is estimated by the Deputy Commissioner to amount to four or five hundred thousand maunds in the year. In the Garrow Hills the rice, as a rule, suffices for the wants of the people; only in time of scarcity they import from the plains of Mymensingh and Goalparah. The head-quarters station of Tura is reported to be entirely dependent on the plains for its supplies. During the present season of anxiety it is fortunate that the rice harvests in Assam have been fairly good, and exports from the province, instead of imports, have this year taken place.

The Cooch Behar division imports on the whole, but very slightly it is said, and the district of Julpigoree exports in small quantities. Goalparah imports from Rungpore, Mymensingh and even from Serajgunge, but the imports are, as has been intimated, mostly passed on to Assam. The district supports itself. Cooch Behar district imports inconsiderably from the same sources, and exports a little by land carriage to the Dooars. Into Darjeeling, rice is imported from the Terai, but the largest share of the station supplies is imported or passed on from Kishengunge in Purucah and from Julpigoree, Rungpore, and Dinagpore.

The importation of rice into Behar is large; and rice is a principal food crop in Behar, though among the poorer classes and especially in the district of Sarun, maize and barley are in a great degree the food of the people. It may be roughly stated that in Behar ordinary cultivators eat their meals, half rice and the other half in cereals, millet, or pulses.

The emporium of the up-country trade is Patna. The city of Patna has been described as a centre for collection and distribution; and its position on the Railway and on the Ganges just where the Ganges, Gogra, Gunduck, and Soane become united, and where the traffic branches off to Nepaul, gives it in this respect great advantages.

The Ganges borne river traffic with Behar is now registered by Government at Sahebgunge, an important mart east of Bhaugulpore and to the extreme north of the Sonthal Pergunnahs. Sahebgunge is most favourably situated as the place of registry, above the point where the most westerly of the Ganges mouths leaves the main stream for the sea and below the junction with the Ganges of all the great tributaries that flow through the Behar districts. During the year 1872 the chief despatches of rice registered at Sahebgunge were:—

	Mds.
From the Maldah and Dinagpore districts, about...	1,500,000
„ Rajshahye district, about ..	320,000
„ Dacca and its neighbourhood, about	420,000
„ the Moorshedabad district, about	320,000

Rice from Central and Eastern Bengal was most largely consigned to—

	Mds.
Mirzapore, which took about	110,000
Benares,	300,000
The Ghazee-pore district, which took about	760,000
„ Tirhoot and Sarun districts took about	580,000
„ Patna district took about	760,000

• These quantities, as was remarked in the Government Resolution, seem large, but after all 1,340,000 maunds of rice is comparatively an insignificant contribution to the food-supplies of the thirteen millions of people in the Patna division, and would barely feed one-third of a million of people for one year. In point of fact the river traffic is doubtless much larger than has been registered: the year 1872 was the first year of registration, and the arrangements were not altogether complete and will be improved by experience; but under any circumstances it is to be feared that the figures will always give an under-statement of the full importation. It is impossible to entirely stop the system of bribery, for in the first place the boatmen and manjees dislike been stopped and overhauled and would always sooner pay something to avoid it, while the threat even of disturbing the cargo to measure the boat would be quite enough to make the owner give a present to avoid the annoyance and damage that would be caused to him; and again at a place like Sahebgunge many boats may go by with a favourable wind during the rains without the possibility of their being brought to. These facts have been pointed out by Mr. W. LeF. Robinson, the Magistrate of the Dinagepore district, who has also shown by an interesting examination of the up-country traffic derived from the merchants' account of the large marts of that district, that the Dinagepore exports are much larger than have been registered. The Sahebgunge returns register an up-country export of 969,575 maunds from Dinagepore. Mr. Robinson, however, shows that from six marts on the Poornabubha river alone, the up-country exports amounted in 1872 to 985,009 maunds, and this does not include the large mart of Raigunge on the Kooleck, whence the exports are about 700,000 maunds, "to say nothing of Kalkamara, Assanee, and other marts on the Tangun, Poornabubha, and other smaller streams which all lead to the Mahanuddee and so to the North-West." The Magistrate of Purneah also has drawn attention to the fact that the large consignments of rice which come down the Koossee river and go up-country to Behar and the North-Western Provinces necessarily escape registration as they enter the Ganges above that place. Even, however, with these defects, it must be admitted the results of the Sahebgunge registration are most valuable and interesting, and have thrown a

flood of light on matters of which we were previously in the greatest ignorance. They give an approximate clue to the importations and exportations between Bengal and Upper India such as we never before possessed, and experience and care in registration will go far to remedy the defects which were indeed inevitable on a first experiment. It is, it may be said, a matter of surprise and congratulation that the returns are so valuable as they really are.

The imports of rice into Behar and the North-Western Provinces by Railway are more difficult to calculate, as the traffic returns of the East Indian Railway do not record this information in a very intelligible shape. Altogether, it is apparent that the up traffic of this line in rice during 1872 amounted to about two millions of maunds, but it is not apparent what amount of this was destined for the Patna division, and the intermediate stations, and how much was consigned to the Upper Provinces. Roughly speaking, as far as can be gathered from the statements, it may be concluded that about half this amount was for Behar and half for the North-West. This unpractical nature of the East Indian Railway returns is much to be regretted; and their defects are the less excusable as the returns of the Great Indian Peninsular Railway are perfectly clear and well arranged. Perhaps in future years the statements of other Railway traffic may be assimilated to these. The Lieutenant-Governor of Bengal, as we are told in the resolution on the Sahebgunge traffic, "has submitted to the Government of India a statement of the traffic returns he would wish to receive and have published for general information regarding the East Indian Railway and Eastern Bengal and Mutlah Railways." We may next year expect more information on the subject of the movement of food-grains by rail.

The districts of the Bhaugulpore division generally support themselves with rice and export rather than import. The produce of Monghyr and Bhaugulpore is inferior and scarcely ever finds its way into Bengal. In former years, however, large quantities of rice have been exported westwards from these districts by rail and by boat, but in 1872, for some reason which is not explained, the exportation was next to nothing. Purneah, which in all respects is more of a Bengal district than the other parts of the division, exports both to Calcutta and the up-country markets. There is also a rice trade from Purneah into Darjeeling. There is usually a very large importation of rice into the northern part of the Bhaugulpore district from Nepaul.

The vast and wealthy district of Tirhoot both exports and imports rice. The northern subdivisions of Sêetamurhee, Mudhubunsee, and Durbhungah, bordering on Nepaul, are extensive rice

growing tracts, and export, especially into the districts of Sarun and Shahabad. There is an import into the sudder subdivision and southern parts of the district from Maldah, Bhaugulpore, Monghyr, and Purneah. Rice also comes into Tirhoot from Bengal Proper along the river. Only small quantities are said to be imported from Nepaul. Chumparun also ordinarily exports rice, for the most part into Sarun, Patna, and Tirhoot. Food, on the other hand, is largely imported into the over-populated district of Sarun even in ordinary years. A large quantity of rice finds its way from Tirhoot, Chumparun, and Nepaul, and a smaller quantity comes by the river from Central and Eastern Bengal to Revelgunge, Dooreegunge, and one or two other large marts on the Gunduck and Ganges, whence it is distributed into the district. The Ganges traffic returns give 361,520 maunds of rice imported into Sarun. The Magistrate considers that this is below the usual import. He states that from four to five hundred thousand maunds are annually landed at Revelgunge alone, "and if to this be added the amount received at other places, it appears likely that the ordinary imports from down country must equal nearly six lakhs per annum." It is estimated that from 15 to 20 lakhs of maunds of rice are imported into the Sarun district from the Nepaul Terai. Shahabad imports rice from Gya and Palamow and also from Bengal. The imports are usually not very large. The Patna district imports and exports. The south-east part of the district, comprising the Behar subdivision, exports, the remainder of the district imports rice, chiefly from Bengal. The Patna district is, as a rule, not dependent on outside places for its sustenance, and it has large marts of its own most conveniently situated in respect of rail and river communication for obtaining supplies when required. In ordinary years the rice crop grown in the Gya district is sufficient for the consumption of the people, and exports and imports are inconsiderable. In the present year and when there is scarcity, the merchants import their rice from Patna.

The traffic in rice in the Chota Nagpore division is inconsiderable. The extensive district of Lohardugga exports somewhat into Behar, the district of Singhbhum in the south-east of the division also exports slightly, Maunbhoom exports eastward to Bancoora and westward to Hazareebaugh, but all these transactions are insignificant. "Articles of commerce are still conveyed chiefly on the backs of pack bullocks," though carts are coming into use where roads are opened out; but the means of communication in Chota Nagpore are very deficient. Many new provincial roads in the division are now under active construction.

In conclusion, it may be convenient to summarize briefly the generalisations we have arrived at in the course of this article.



We have given the principal directions and quantities of the traffic of rice in Bengal as follows :—

	Maunds.
Exports from Bengal into Calcutta for export by sea ... ..	10,000,000
Exports from Bengal into Calcutta for consumption in the metropolis and its environs ...	7,000,000
Exports from Lower, Central, and Eastern Bengal into Behar and the N.W.P. for consumption—(Behar 3½ million and the N.W.P. 2½ million maunds) ... ..	6,000,000
Exports from the Soonderbuns and Chittagong by sea ... ..	3,000,000
Exports from Orissa by sea other than into Bengal Ports .. ..	1,500,000
Exports from Bengal into Assam ... ..	1,000,000
<b>Total</b>	<b>27,500,000</b>

Or, in another form, out of the surplus produce of the rice districts of Bengal sixteen millions are exported out of the Bengal provinces :—

	Maunds.
From Calcutta by sea ... ..	10,000,000
Chittagong, &c., by sea ... ..	3,000,000
Orissa by sea ... ..	500,000
Into the N. W. P. inland. ... ..	2,500,000
<b>Total</b> ...	<b>16,000,000</b>

and eleven and a half millions are consumed by the importing tracts within the provinces :—

	Maunds.
By Calcutta, &c. ... ..	7,000,000
„ Behar ... ..	3,500,000
„ Assam ... ..	1,000,000
<b>Total</b> ...	<b>11,500,000</b>

H. J. S. COTTON.

# LIMITATIONS.

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## I.

Would you loose the tangled skein,  
Subtle strength of human wit ?  
Try the time-worn knot again :—  
'Tis not yours to alter it.

Ever over Nature's scene  
Clouds and changing glories flit.  
What does all the pageant mean ?  
Guess,—you cannot alter it.

Wherefore makes the human swarm  
Toil that few may e'er remit,  
Plodding on in calm and storm ?  
Strive,—you cannot alter it.

Or be unto duty's sway  
Consequence or conscience knit,  
Wrong or right be what it may,—  
Thinking will not alter it.

Be it fact that you are free,  
Be all done and pondered writ  
In the page of destiny,—  
Puzzling will not alter it.

What avails the righteous will ?  
Millions unto wrong submit.  
What the issue ? good or ill,  
Dreaming will not alter it.

Intuition, we suppose,  
Saves the soul with sorrow smit.  
Can or cannot mind disclose  
Truth,—it cannot alter it.

Is there any God ? you cry,  
 One for prayer and praises fit,  
 Not a cold fatality ?  
 Muse,—you cannot alter it.

Are the dead all dead and done ?  
 Is the grave with promise lit ?  
 Is there life when life is gone ?  
 Ask,—you cannot alter it.

Things were made not, no nor can  
 Answer come by human wit.  
 Brooding o'er the fate of man  
 Surely cannot alter it.

## II.

Not alter it ?—Ah, say not so ;—indeed  
 We are not slaves of that disastrous creed  
 That is no creed, but is fatality.  
 'Tis ours to alter all we feel and see,  
 And as we joy or grieve  
 To make the world of things replying seem  
 Alive with sympathy, which poets deem  
 They know, who but believe.

Not alter it ?—The splendours of the sky  
 Are to the seeing or unseeing eye  
 Or empty shows or meaning mysteries.  
 Lightning, and stars, and suns that set or rise,  
 The winter, and the night,  
 Rain-laden clouds, and sunlit summer days  
 To some are nothing : scanned by wisdom's gaze  
 Are holiest delight.

Not alter it ?—The labour and the pain,  
 The streaming eyes and bended knees are vain ?  
 Not so : no sickness is, but sympathy  
 May be a healing balm ; no agony  
 That love may not divide.  
 Evil must be, but by so much the less  
 Will there be evil as we dare confess  
 The good alone our pride.

Not alter it ?—There is no right or wrong,  
No guide, no duty : wisdom toiling long  
Hath found no clue, nor any certitude.

The cultured citadel, the village rude,  
Keep each a different rule.

The various climes a varied measure hold :  
And each who sinning trembles or is bold  
Is his own conscience, fool.

A lie !—alas, indeed it seems a lie.

Who knoweth ?—Yet this much is certainty  
That all is wrong for each, which he believes

To be offence,—be there a God who grieves,  
Or be sin only pain :

And this,—that men with wider knowledge rise  
And lift the wider age which multiplies  
The deeds they should disdain.

Not alter it ?—No eye can penetrate

That deepest dark,—whatever is, is fate,  
Foreknown or unforeknown, and circumstance

Whirls every puppet in unmeaning dance  
Till death shall end the jar

Of faith and fears. If free we may not be,  
At least this is one more necessity,—

To act like men who are.

Not alter it ?—'Tis oft we guess amiss,

And ne'er hath reason taught us more than this,—  
(Did he not say it whom they crucified ?)

“Seek ye, and ye shall find.” Then seek ! Abide  
The issue ! Nay, the word,

Be sure, was idle : yet 'twas something when  
He spake in Israel that there tingled then  
The ears of them that heard.

Not alter it ?—nay, wherefore should we so ?

God is, or is not : either way we know  
That if he is, he loves his children well,  
That if he is not, neither earth nor hell  
Hath terrors. Death is all.

We will not fear the everlasting sleep,  
Wherein we dream not, no, nor toil nor weep,  
But slumber as we fall.

Not alter it ?—then is the grave the end,  
Indeed the end, and all our hopes portend  
Is sad delusion which the falling rod  
Shatters : beyond is neither life nor God,  
Nor evermore shall rise  
The clay we consecrate with sobs and tears,  
A lifeless trust to unreviving years  
Is every friend who dies.

Not alter it ?—Ah ! weep not so :—not such  
Is truth—not all the truth. 'Tis surely much  
To work and love, and feeling Nature's power  
Work in us, store against the dying hour  
Undying memory  
Of what we did and were,—our own reward  
And others' heritage, when long the sword  
Has withered where we lie.

And if—Ah God !—and if there be for men  
Beyond and after any life again,  
Then 'tis not vain to brood upon our fate.  
Ask,—ask ! the answer comes tho' coming late.  
Perchance when life shall cease,  
Then most for those who doubting strove to know  
At all cost truth shall dawn—we know not how—  
Knowledge and love and peace

A. H. C.



# THE CALCUTTA REVIEW.

NO. CXVII.

## ART. I.—MYTHOLOGY AND RELIGION OF SAHARUNPORE.

**H**URDWAR.—A volume might be written about the mythology of Hurdwar. Its sanctity, besides being intrinsic, reflects that of the many holy places situated within the same mysterious region, parts of which are associated in the Brahminical mind with superstitions much more venerable than the belief in the efficacy of periodical bathing unto salvation. We here find ourselves at the threshold of the Hindoo heaven, and tread the same ground as ancient Svayumbhuva, at once the Noah and the Adam of the East. The most meagre review of the local myths carries us back to the Creation.

From the Snowy Range to the temple of Kupoolnauth at Myapore, from the River Towse\* (Támsá) to Mount Budáchul, spreads an Eden of surpassing loveliness, two hundred ~~cross~~ long by one hundred and seventy wide—the Kidárkhund. There dwelt the great god Shiv, countless ages ago, when the precinct was an impalpable entity not confined to material boundaries, visible to human eyes, and in the form of Bámha, performed the work of creation. The Sewaliks, the hills of Shiv, mark the divine abode.†

\* In the Doon.

† These hills are all included in "Mount Himáchul," but each separate ridge has its individual name, e.g., the Nil Purvut east of Hurdwar, beyond the Nil Dhárâ or main stream of the Gaggas; the Bil Purvut west of Hurdwar. "Sewalik" is identical with "Shiwala," the common appellation of the coniform temples dedicated to Mâhadev; the proper word is Shivalaya (from शिवलय an abode). On the Saharunpore side of the hills, the term "Sewalik" is not generally used, but in the Doon the "Shib Puhâr"

is commonly spoken of. The account of the word given by the Dehra Mohunt and retailed by Thornton (Gazetteer), originated in the former's ignorance of the elements of Sanskrit. "Sewalik, a corruption of Sivawâlâ." The Muhammadan derivation (v. Teimours and Baber's Memoirs) from *suwa-lakh* a "lakh and a quarter" is well known.

The Shri Bhugvut places the heaven of Shiv on the top of Mt. Koulâs, 16,000 miles from earth (Ward, iii, p. 25, Heeren, iii, p. 220). The moderate elevation of Koulâs

After the creation of the world, Bramha had ten sons. One of these, a contemporary and son-in-law of the first man Svayumbhuva, was Duksh Prijâputee. This country, then called Himâvut Desh, was subject to him. Its name was therefore changed to Duksh Prijâputee Kshetr. Duksh, being lord of all, gave a grand feast *सर्व*. To it were asked Vushist and all the other Munies and Brahmas; Indra, too, and the rest of the gods. Shiv, the host's son-in-law, alone was not invited. His daughter, Mâyâ, the destroyer's wife, came unbidden. She was consequently treated with contumely, nay, subjected to the humiliation of hearing insulting remarks aimed at her husband. Driven wild by her father's taunts, she burned herself to death in the sacrificial fire—the first instance of a Suttee, whence she is styled Mâyâ Suttee. The scene of her self-immolation is an old tank—the Suttee Kund—not far from Kunkhul. Blind with rage, Mahadev flew to the spot, and picking up her charred corpse on the prongs of his trident, rushed away. In one place fell an eye; in another, a leg; in a third, some other part of her body—and from each remain grew a Devee. One was Oojlee Mâtâ (Devee), whose temple is close by. She is represented with eight arms, sitting on a tiger, and her help is invoked whenever a child is smitten with small-pox. Mâyâ will presently reappear in another form.

The destroyer struck off Duksh's head. Bramha and the other gods, horrified, implored Shiv to resuscitate his relative. The fierce deity, appeased, restored Duksh to life. The grateful Prijâputee accordingly erected the temple of the Duksheshwur Mahadev near the Ganges north of Kunkhul. This shrine marks *Duksheshwur Tirth*, the sanctity of which is of a more venerable antiquity than that of Gunga herself, for she did not come till the incarnation of the seventh Munnoo. Kunkhul is in consequence most holy, and a man like unto a Chandâl obtains everlasting life from bathing there. A sacred grove once shaded the place. Some Muhammadan tyrant, named Afrásâ, burned it down. Gunga, enraged, rose and swept away his elephants, horses and men, so that he was fain to distribute alms among the Brahmans and depart.\*

When Duksh was raised from the dead, Mahadev granted a boon—that the scene of the unlucky festival should be sacred

compared with the stupendous height of other mythological mountains, preserves to a certain extent the proportion between the lower hills and the more lofty Himalayan ranges. Vishnu is usually regarded as the creator, Shiv as the destroyer, but the worship of the latter prevails,

and the Hurdwar Brahmans follow the authority of the Askund Puran.

\* This story has a very recent origin. The derivation of Kunkhul is said to be क *“who?”* and ख *“worthless, bad”*—for who is so bad that his sins cannot be cleansed by bathing there?

and a place of pilgrimage, under the name of Māyāpooree Kshetr, and that whoever performed charitable observances there, should be requited immeasurably.

Māyāpooree Kshetr reaches from Sheo Kootee in Terree, eighteen *koss* north of Hurdwar, to the temple of Puchewul Nauth Mahadev, eighteen *koss* south, on the right bank of the Ganges, near Sultānpoor Kunāree. The eastern boundary is a line drawn through the Sewaliks, parallel to the Brimh Khund or bathing-ghaut, and six *koss* from it; the western is a similar line also drawn at a distance of six *koss* from the ghaut, past the Huriswutee Nuddee, which must be one of the many streams intersecting the Puthree Nuddee Jungle, perhaps an old branch of the Ganges.

It requires no great penetration to recognise in this tract the famous Bramhāvarta, "frequented by the gods, the scene of the adventures of the first princes, the residence of the most famous sages."\*

Besides Prijāpute, Bramha had many other sons: Atree, born from his eyes, settled at Kunkhul; Vushisht, born "from the air" which produces deglutition, settled at Joulapōre. Mureechee, like Atree, proceeded from his eyes; his son, Kasyapa Munce, married Duksh's daughter, Aditi, and received Māyāpoor (Myapōre) as his portion. The sage Gautum took up his abode in Misrpoor, and Sāndil, in Shivpooree. These five towns constitute the original seat of the true Brahmans, descended from the guests invited to the tragic feast. They are called the *Punjpooree*.

The mysteries of Māyā's death and her father's resurrection took place in the Satya Yug, precluding a stupendous phenomenon—the Deluge.

Kushyapa's grandson was Sradhev or Vaivuswata Munoo. He, in the form of Satyavrata, King of Dravydya, near the Himalaya† was one day making a libation to the manes of his ancestors on the banks of the river of Kritmálá, when a little fish swam into the hollow of his hand, and the Raja replaced it in the water. Addressing him humbly, the creature thus spoke; "why dost thou leave me to be eaten by the monsters who devour such little fish as I? I dread the waters of this river." The king therefore took the fish under his protection, and placed it in his *lotah*. During the night it grew too large for so small a vessel, and besought Satyavrata, saying, "oh, take me out and put me in some larger place!" So he threw it into a pond. In a few minutes the fish increased two cubits, and exclaimed, "I cannot stay here, let me have more room, for I am under thy protection." The Rájá,

\* Elphinstone i, p. 395. The square *koss*, i.e.,  $36+12=48$ ; in Brahmans generally speak of the stead of  $12 \times 36 = 432$  sq. *koss*. tract as covering a superficies of 48, † v. Tod's Rajasthan, vol i, p. 21.



consequently placed the miraculous animal in an enormous tank, where it grew still larger and complained again of want of room. At last he put it into the sea, where it became a whale, and said, notwithstanding, to Satyavrata, "other huge fishes will devour me, so it was wrong to put me here." Hearing this the King said; "who art thou that dost mock my spiritual ignorance? Never have I seen or heard of such a fish as thou, who hast in one day grown 100 *jojuns* (400 *koss*). I am certain thou must be Narain, who assumes various forms for the purpose of protecting human beings. I adore thee, and desire to know with what object thou hast taken this shape." Vishnu Bhugwân replied, "on the 7th day from this, the three worlds will be deluged with waters; thou shalt then get on board an ark sent by me, with all sorts of medicinal herbs and seeds of every kind and pairs of all living creatures, and sail upon the bosom of the waters in company with the seven Rishies. The lustre of the sun and moon shall fade, but not that of the seven Rishies, and the ark will withstand the fury of the elements. Lash the vessel to my horn with the coils of the great serpent, and I will tow it about through the waves protecting thee for the sake of the seven Saints."

In due season the Deluge came, and as long as the floods prevailed, Bhugwân, in the figure of a fish, preserved Satyavrata from their fury, dragging along the ark tied to his horn.

Just as the seventh Menu, Vaivaswata is identical with the first Svayumbhuva: so Duksh, Shiv's father-in-law, created from Bramha with nine others at the beginning of the world by that legend remain common in Hindu mythology, reappears in the person of another Duksh fifteenth in descent from the first man, one of whose ancestors Prithoo, "settled the whole world," and performed the sacrifice of the horse one hundred times. This confusion of persons symbolizes the leading idea of these myths; viz., that Mâyâpooree Kshetr (Bramhâverta?) was the cradle of the human race, both before and after the flood.\*

The Satya Yug had elapsed, and yet another marvel was to come to pass — the descent of the Ganges from heaven in the Treta Yug.

King Sagur, having no children, condemned himself to a long and severe penance, during which the sage Bhṛigoo appearing to the penitent, promised him no less than 60,000 sons. To his disgust, Sagur's queen was delivered of a pumpkin. This the king dashed upon the ground in a rage. His want of faith was

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\* Duksh II. may of course be precise about making Duksh I. the considered the hero of Mâyâkshetr; father-in-law of Shiv, as well as of I, however, follow the authority of Kushup Vaivaswata's grandfather, my local informants, who are very.

rebuked, for from the seeds of the fruit rose 60,000 children who were promptly placed in 60,000 pans of milk by as many nurses. When they grew up, their father resolved to perform his hundredth Ashwamedh. The reigning Indra, apprehensive of Sagur's succession to the throne of heaven, stole the intended victim, and placed it in the dwelling of the sage Kupela, to avert suspicion, in case it should be found. The 60,000 sons, having searched the surface of the earth in vain, began to dig downwards, and penetrated to *patalu* (hell), where the horse was standing beside Kupela. Supposing him to be the thief, they were debating whether they should tie him up and beat him, when the wise man awaking from his mental abstraction, they were straightway reduced to ashes. The king learning this, sent his second Ranee's son Asmunjus to the holy man, who returned the horse with a message that if Sagur washed the remains of his children in Gunga's waters, they would be restored.

Sagur died a hermit. His great grandson Dulipa, likewise became an ascetic, and, being childless, prayed to the gods for a son, as well as for the deliverance of those of his great grandfather. Shiva promised him offspring from the intercourse of his two queens, one of whom brought forth a shapeless mass of flesh. The monster was called Bhugeeruth. One day, Ashtabukr, a hump-backed muneer of unsteady gait, came to visit the ladies. Their son, rising to greet him, wriggled in such a way that Ashtabukr thought the boy was imitating him, and exclaimed, "if thou canst not help wriggling thus, be a perfect child; but if thou art mocking me—perish!" Bhugeeruth's grotesque figure immediately developed into perfection. The old man blessed him and prayed for the resuscitation of Sagur's 60,000 sons, until Bramha in pity gave him a drop of Ganges water; Vishnu, a shell, the blast of which the goddess could not help following. Bhugeeruth blew the instrument (its sound is familiar to our ears) and Gunga descended upon earth on the tenth day of the moon's increase in Jeyth.\* In her course she accidentally swept away the mendicant's dish, flowers and other religious appurtenances of the pious Junhoo, who flew into a rage and swallowed her up, though moved by Bhugeeruth's prayers, he allowed her to escape through his thigh, whence she has been called Junhuvée. The goddess and her companion were now doubtful in what direction they should proceed, not knowing precisely where the remains of the 60,000 were. She therefore divided herself into one hundred streams, to ensure the success of her mission. At length her healing waters found their way to the ashes of Sagur's

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\* Shiv Jee caught her on his head by her weight. to prevent the earth being crushed

children, who were freed from the curse of Kupela and borne to heaven in chariots.

Meanwhile, Gunga's departure caused a great commotion among the 330 million gods of the Hindoo pantheon, for how could they any longer wash away their own sins and iniquities? A petition was sent to Bramha. He effected a compromise, deciding that she should continue to rise in heaven and only flow over the earth. She accordingly has three names. The immortal gods call her Mumdakinee, mortal men Gunga, and the inhabitants of the infernal regions, Bhuguvutee or Bhugiruthee.

There is a difference of opinion as to whether she is the daughter of Mount Himávat, or an emanation from the sweat of Vishnu's foot, caught up by Bramha in his alm's dish. Her idol is the figure of a white woman wearing a crown, holding a water-lily in her right hand, and riding a sea monster.

The advent of the beneficent Deity dimmed the memory of Máya's suttee, so that during the rest of the Treta Yug, the name of Gungádwar superseded that of *Máyápooree kshetr*.

In the Dwápur Yug, Hurce or Vishnoo Bhugwan, manifesting his presence at Gungádwar, its name was changed to Hureedwar.

In the Kul Yug, owing to the prevalence of the worship of Hur or Mahadev, the name "*Hureedwar*" threw the former into the shade. Both Hurdwar and Hureedwar are, however, correct, because through this portal (*dwar*) all pilgrims must pass before visiting the shrine of Budree Narain (Vishnu) and Kedárnauth (Shiv) in the higher Himalayas.\* Those who desire to accomplish the more arduous undertaking are initiated here. The neophyte, descending the great bathing-ghaut, the *Hur-kee-pairee*, or Mahadev's stairs, plunges into the sacred pool beneath (the *Brimh khund*), and is then qualified to proceed farther.†

The original Hur-kee-pairee was, the Brahmans allege, destroyed by the Budhists, and rebuilt, together with the Hur munder

\* Heeren (vol. iii., p. 281 *seq.*) considers that the original seat of the Brahmans is in the very heart of the Himalayas, at Budreenauth itself. The idea is evidently preposterous. It is far more likely that some of the priesthood first settled at Hurdwar, and then felt their way into the northern solitudes, than *vice versa*. In 1807 two or three hundred pilgrims are said to have forfeited their lives in the attempt to reach the more remote temples.

† The following quaint translation of a passage from Bernier gives an excellent description of the process of ablution—"these idolators at once

"plunged themselves wholly into the water, I know not how many times one after another; standing up afterwards in the water, and lifting their eyes and hands to heaven, muttering and praying with great devotion, and from time to time taking water with their hands, which they threw upwards towards the sun; bowing down their heads very low, moving and turning their arms and hands sometimes one way, and sometimes another, and thus continuing their plunging, praying, and apishness unto the end of the eclipse."

to the left of it, by Shunker Swāmee during the Brahminical revival. Of Mahadev's temple Muhammadan iconoclasts have left little except some skilfully carved masonry, bearing representations of elephants, horses, and small human figures. Rájá Mán Singh of Jeypore improved the old ghaut, and our own engineers again remodelled his work.

Bathing in the Ganges is always efficacious, but regular fairs are held at certain auspicious periods.

The *Mekhee* (so called from मेख the Ram), the ordinary annual fair, occurs every April,\* in the month of Baisakh, when the sun enters Aries according to the solar computation of the Hindoos.

The *Kumbh* (so called from कुम्भ the Watering Pot), occurs every twelfth year, when at the time of the sun's entrance into Aries, Jupiter is in Aquarius.

The *Bárunee* fair takes place when the 13th day of the dark half of Chait is a Saturday; the *Maha Bárunee*, when the twenty-fourth lunar mansion (Sutbisha) corresponds with the same period, and then one must fast till the bathing is over; and the *Maha Maha Bárunee*, when, in addition to all these conditions, the *yogá* for the day is Subhá, i.e., the twenty-third of "twenty-seven divisions of 360 of a great circle, measured upon the "ecliptic."†

These are the principal fairs, but besides them, there are many others; in the month of *Sáruun*, when the sun enters Cancer, and in the month of *Magh*, when it enters Capricorn; whenever there is an eclipse of the sun or moon; on the 17th of every Hindoo month (a very auspicious day); on the last day of every month (*Poorunmāshee*); on the 15th day of every month (*Mavish*), and the fair is larger if the day be Saturday; and at the *Dusuhra*, on the 10th of the moon's increase in *Jeyth*.

The last-mentioned festival is celebrated in honour of Gunga's descent from heaven, and the fact of its being among the less important annual gatherings justifies the presumption that the sanctity of the river has a more remote origin than the fable of her appearance here below. It must have emanated from a principle less material than anthropomorphism—man's natural impulse to revere the powers of nature.

To ensure the washing away of sins by ablution in the Hindoo Jordap, the sincere desire for their remission is necessary. Mr. Ward mentions a proverb aptly illustrating the feelings with which the orthodox Hindoo regards the ceremony.† To die like "Rájá Nuva Krishna" of Nuddea was (1800 A.D.) tantamount

\* Generally on the 11th.

‡ III, p. 214.

† Asiatic Researches, vol. ix, p. 366.

"to dying like a dog." This reprobate preferred breathing his last dying quietly in his bed to a suicidal immersion in the holy river.

The Brahminical rubric distinguishes almost every square foot of ground around Hurdwar. A few of the more sacred spots deserve to be signalised.

*Gunesh Ghaut*, is the first Tirth between Myapore and Hurdwar,\* where a branch leaves the parent stream to fertilise the plains below. To bathe, give alms and perform the usual religious ceremonies there, is a special act of virtue.

Then the pilgrim meets a ravine running down from the Suwāliks to the water's edge—the *Lultā Rao*, properly called the *Shiv Dhārā*. After bathing near it, one becomes like unto Shiv.

A huge banyan tree shades the *Biluk Tirth* sacred to Bilkeshwur Mahadeo.

Beyond it is *Bishw Tirth* where Rājā Ven (Dhurm Dhvuj) lies, turned into a snake by the curse of Durvāsā. Ablution in its waters "ensures absorption into Bramha."

If the pilgrim has committed the crime of killing a cow, even accidentally, he expiates his offence farther on, at Gao Ghaut the *cul-de-sac* of a narrow lane skirting the famous Aláhya Bye's house. A *mehter* taps him gently on the head with a shoe, and thus purified, he proceeds to the Brimh kund, where a crowning immersion entitles him to attempt a more dangerous pilgrimage.

The myth about king Sagur's sons, is typical of Gunga's saving powers. It has been asserted that they would fail in a few years, that the *Kumbh* fair of 1867 was the last but two of the great duodecennial meetings. The report excited much interest, and the Cashmere Rājā convened a jury of learned pundits to settle the question.\* They all agreed in the immortality of the goddess's sanctity, her glory would never depart, they decided abiding always in five places, Hurdwār, Keedār, Kāshee Gungootree, and Gunga Sagur.

Some endeavour to reconcile the doctrine of the approaching decline of river-worship in the north of India, with the contrary belief. A time may come when Gunga will pass away; the period is, however, so distant as not to affect ordinary terrestrial calculations. the goddess has not yet reached Patalu; Sagur's sons have not been redeemed; and the true reading of the Hindoo Scripture is this:—

When Rājā Bhugeeruth was doing penance and magnifying the deity, the serpents—the *Nāgs*—were engaged in the very same

\* Many Brahmans will deny this, but I am positive that it was the case; also, that before the Rājā came, the pundits unanimously declared to me that three *Kumbhs* only remained. Sleeman's *Rambles and Recollections*, vol. i, p. 6.

way, desiring to draw her down to hell. She appeared to him first and he besought her not to go without having absolved Sagur's sons. Having heard his petition, she went with him to the place where the *Nágs* were doing penance. The venomous reptiles approached the goddess, burning up the trees and plants with their fiery poison, as they came. Bhugeeruth glorified them, and being appeased they did him no hurt, but would have carried the goddess away, had not she also magnified them. Her submission delighted the *Nágs* exceedingly so they told her to ask a favour. She said, "Bhugeeruth has petitioned me to "absolve Sagur's sons. Let me then delay my coming to *putál*, "till the second *churn* of the *kule yug* when I will go to your "world, after having resuscitated them."

As we are now only in the first *churn* (cycle ?) of the *kul yug*, many a year must elapse before the descent of the goddess to the infernal regions and her final disappearance.

This legend, which apparently has a special significance, will be again referred to.

*Shúhkumree Devec*.—The worship of Devec, in the person of *Māyā* (Até, Delusion), underlies the sanctity of Hurdwar. Devec re-appears in the local mythology as the destroyer of the Titans. A wild ravine called after her pierces the north-western Sewaliks. Her temple, small and gloomy, has nothing to denote its importance except the beauty of the surrounding scenery.

The giants, Sumbh and Nu Sumbh, drove the Deotas out of heaven and ruled over the three worlds. The gods made a rude image\* of Devec, and adoring it, did penance on Mount Himáchul. Parvutee descending from Mount Koilas to bathe, beheld the assembled deities absorbed in prayer. She asked them what was the object of their worship. They remained silent, plunged in meditation, but a substance of the same essence (*Shuktee*) proceeding from her body, *Kálkee Devec*, the goddess of death, said, "Parvutee, these Deotas persecuted by Sumbh and Nu Sumbh, "adore me."

Now, one day, Chund Moond, a follower of the two Titans, met Parvutee riding upon a tiger over the crest of the hills, and perceiving her beauty to exceed that of all women, told his master what he had seen ; treasures from among gods, men, *Kákshasas* and *Nágas* were in their dwelling, but he had discovered a jewel among women on the tops of the Himalaya, named Devec, surpassing everything. Hearing this, they sent their messenger, Sugreev, to Devec. He begged her to accompany him to the dwelling of the giants, and Sumbh, the elder king, would make her the chief of his queens (*Putrañee*). She answered, "I know Sumbh to "be lord of the universe and all the treasures therein. Still I

\* A *pindec*, or round ball of earth or stone.

"cannot go near him, for when a child, while playing with other girls, I made a vow that I would marry no one who could not vanquish me in battle. Go and give him this answer." This scornful message exasperated Sumbh exceedingly, and he sallied forth with his army, thinking to seize her.

When he and his followers came near, she made many *Shuktees* spring from her body, but Sumbh had a myrmidon, called Rikt Beej whose blood was seed, and wherever a drop of it fell, a strong Deyt (Titán), equal to himself, grew up, so that as the Goddess and her "*fetches*" struck him, making his blood flow, innumerable Deyts sprang forth. The gods trembled at this, and wondered how she could possibly win. Parvutee, undismayed, shot out eight arms each wielding a weapon, and exhorted her double, *Kálee*, to open her mouth and assume a terrible aspect. *Kálee* forthwith joined in the fight and drank up the blood which fell beneath the other Devee's blows. Thus all the Deyts perished and Nu Sumbh himself was destroyed. Sumbh alone survived. He, enraged, taunted the goddess saying, "oh Devee, thou hast no reason to be proud of having destroyed so large a host; hadst thou performed the feat single-handed, I should have admitted thy superiority. Since, however, so many *Shuktees* have helped thee, I do not acknowledge myself beaten." She therefore challenged him to single combat. Such an encounter ensued as amazed all, both Deotas and Deyts. Nu Sumbh's death decided the event of the day, and the gods magnified Devee. She, being pleased, promised to grant any favour they might ask. They answered "oh Devee, thou hast fulfilled our desires but we ask yet another boon, that whenever we are in difficulty, if we call upon thee, thou wilt speedily help us, and whenever any mortal utters thy name, thou wilt protect him also." She replied, "good—it shall be so; and I may now reveal the names of the different forms in which I will avert evil from mankind; remember them; 1st, *Bind Bāsnee*, on Mountain Bindyáchul; 2nd, *Joonesree* and *Yumnesree*, on Mountain Buhg Kot; 3rd, *Shákumree* and *Sutákshee*, on Mount Sur Kot. My other names are enumerated in the Kidárkhund and Márkundé puránâs\* and can thence be learned." The gods enquired the meaning of the third. She explained, when the great hundred years' famine takes place and

\* She has ten other names; 1st, as Doorga, she received the messenger of the giants; 2nd, as Dushubhojja, she destroyed part of their army; 3rd, as Singhuva-hinee, she fought with Riktbeej; 4th, as Muhishnumurdinee, she slew Sumbh, in the form of a buffalo; 5th, as Juguddhattree,

she overcame the Titanic host; 6th, as Kálee, she destroyed Riktbeej; 7th, as Mooktukeshie, she finally discomfited the army of the giants; 8th, as Tára, she killed Sumbh; 9th, as Chinumustuka, she killed Nu Sumbh; 10th, as Jogudgouree, she was praised by all the gods.

"Deotas, Rishies, Tapishies, men, all begin to die, then shall they worship me and I will produce from my body a *sák* (vegetable) to wit, the *Surál* (a sort of yam) upon this mountain Sur Kot, and give them nourishment. Hence I shall be named "*Shákumree*." Having thus spoken the goddess disappeared and the gods likewise departed.

The great famine happened in this wise. The Rishee Gautuma, stern ascetic though he was, could not resist the charms of the beautiful Ahelya, and married her. He soon repented of his choice. Indra, the god of rain, a most unscrupulous deity, previously guilty of stealing king Sagur's horse, conceiving a guilty passion for the sage's wife, proceeded to satisfy his desires at the first opportunity afforded by the good man's absence. Gautuma unexpectedly returned and detecting him in the act of adultery, exclaimed, "ah rascal! hast thou come to work evil in my house?" Then snatching up the deer skin which he used as a couch, he smote Indra, and uttered a curse so disgusting that my pen cannot record the expression of the infuriated saint. Suffice it to say, the imprecation worked, the god's body became one mass of sores, and he retired to do penance in the Sewaliks, devoting himself to the worship of Shiv.\* In consequence of his seclusion, no rain fell during one hundred years, and an universal famine prevailed. There was neither water to drink, nor anything to eat, no, not even grass or leaves. The Mumees and Deotas had recourse to Devec praying for the fulfilment of her prophecy. She regarded them with one hundred eyes, whence her second name Sutákshee (सुत, 100—अक्षि, eye) and kept her promise, nourishing all living creatures in the form of a yam.†

The fossils found in the Sewaliks are esteemed trophies of Devec's prowess against the giants, while the *surál* (*pueraria tuberosa*) is a living monument of her beneficence to mankind. This bulb grows abundantly on both sides of the Sewaliks, and being a common article of diet among the poorer classes, is, in their eyes, a voucher for the authenticity of the myth. During the famine of 1861, it was greatly sought after; here, the Brahman will assert, history repeated itself.

\* The Indresur Mahádev. There are the ruins of an old Hindoo fort called Indurpore at the entrance of the Shakumber Devec Pass. Though most of the masonry has been carted away to serve engineering purposes, and the site is covered with brambles, still enough remains to show that the structure was once extensive. The Brahmans say this was Indra's

residence during his banishment. Rationalists ascribe its foundation to Rana Indeer Seyn, a chieftain, contemporary with Shunker Achárij.

† There is a collateral myth of great obscurity, which represents Devec to have saved the universe in the form of Lukshmee obtained by Vishnu at the churning of the sea.



Having satisfied their hunger, the gods erected a temple and set up two idols therein, the one of Devee the vegetarian (*Sākumree*), the other of Devee, the Hundred-eyed (*Sutákshee*). The Buddhists demolished the building and overthrew the images. In the year 426 S. Shunker Acharj \* brought Rájá Dhurmpāl to Sur Kot, and restored the place, which was again knocked down by the orders of Aurungzebe. The ruins lay concealed beneath a mass of accumulating vegetation, till the rise of Nujeebw Dowlah, when Mirs Ram Jee Das of Saharunpore, a distinguished pundit and physician, a devoted worshipper of Doorga or Devee, had, during a sojourn at Jusmore, a vision commanding him to disinter the remains of the shrine. Next morning a Goojur herding cattle, told the pundit that his cow had strayed into the hills, and while following her, he had discovered traces of an old temple. Ram Jee Das went with the man and having examined the spot perceived the truth of the dream and understood more clearly the force of what is written in the *Shākumree Mahátim* and *Kedárkund*; for this indeed was evidently the site of the original sanctuary. Ram Jee Das communicated the discovery to the Rajpoot Rana Bahader Singh, soliciting the funds necessary for the restoration of the temple. He also applied to his clients at Saharunpore, Jugādrée and other places. A handsome subscription was collected, and the work commenced. Amid the heap of crumbling masonry, two mutilated images were found, and the pundit grieved since a mutilated idol cannot be worshipped. He passed the night there sorrowing, and had a second vision. Two young girls stood beside him saying, "do not lament, two stones are lying in the " ravine; they bear marks of imagery; take and set them up " as *Shākumree* and *Sutákshee* 'Devee.'" He obeyed the divine command, and after duly performing his devotions before the idols, returned home.

Convinced of the reality of these successive revelations, he directed each of his patients to lay aside offerings (cocoanuts, &c.), for the goddess; their speedy recovery would, he promised, follow. They carried out his instructions and were cured. The fame of the miracle spreading abroad, worshippers† of the double Devee congregated in multitudes. A fair, beginning on the tenth day after the rise of the new moon in Asouj and lasting till the second of the dark half of Kátuk, was gradually instituted. The pilgrims number from 15,000 to 20,000 or 30,000. Some come even from Muttra.† Nine-sixteenths of the offerings go to Rana Petum-

\* Said on this occasion to have also founded Shunkulapoorée, two koss north of Saharunpore. The hill behind the temple is called

Shunker Purvut.

† They come from the Doon, Umbála, Meerut, Delhi, Muttra, Furrukhábad, Murádadáb.

ber Singh, Bahader Singh's representative, one-fourth to Jonálá Pundá, Ram Jee Das's great great grandson, and the remainder to a Goojur, the descendant of the cowherd who assisted Ram Jee Das in his search. The Mahrattas granted Nágul rent-free, to defray the incidental expenses of the establishment.

The local worship of Devee has never, within the memory of man, been sullied by those barbarous rites which were lately current in Lower Bengal and still linger in many parts of that province, unless the Muhammadan legend of the idolater Rájá Kurn, who used to cut off his flesh and sacrifice it to a demon,\* be received in evidence of the contrary. At all events, the influence of Islám cannot be denied to have had a humanizing effect upon the ritual of Northern India.

A striking object stands opposite the temple of Shákumree Devee—a lingam about six feet high, bearing a representation of Mahadev. The god's features are mild and placid, like those of an Egyptian Deity, sculptured with a degree of skill unique in these regions. The rapt expression of the countenance and the long pendulous ears are of the Buddhistic type, yet the idol is pronounced to be Brahminical. This specimen of forgotten art was rescued † from the bottom of a ravine under the temple of Suhesrah Thákur, two or three miles east of Shákumree.

*Suhesrah Thákur.*—This sanctuary commands the head of a chasm (the Bán Gunga) running parallel with the Suhesrah Pass. A narrow pathway, traversing the ridge to the left as one faces the Dhoon, connects the two. A large heap of stones marks the entrance to the track. Successive pilgrims have accumulated the pile. Every man deposits a large stone in token of his visit; every woman, a small one; every child, one still smaller. The long blábur grass on either side is twisted into a complication of knots, for if the devotee fail to tie one such knot, his pilgrimage is fruitless.

The situation of the temple is charming. It rises from the bosom of an amphitheatre of lofty hills fringed with luxuriant vegetation, shelving rapidly into the Bán Gunga. In Brahminical topography the western hill is Káka Chul; the eastern, Deva Chul, where gapes a hole, once the retreat of Gautum after the detection of his wife's lewdness.‡ The building itself is not in keeping with the beauty of the site. It is built from the remains

\* Such a sacrifice was considered most acceptable to Kalee.

† By Mádhó Das, a half-crazed Bairágee fukeer. He had watched it lying there for twelve whole years, till Sirdar Runjore Singh visited Suhunsra Thákur in 1851 and had it taken out, at his request. It

is strange that such a fine image should have been so long neglected in a place frequented by numerous worshippers.

‡ In later years, the less celebrated Mádhó Dás lived there. It was during his residence in the Himalayas, that Gautum founded the Nyáyuk sect.

of more ancient and architectural structures, relics\* of which are scattered around, and cannot be many hundred years old, as the present Mohunt is only the fifteenth, though its materials are those of an edifice constructed by the gods in the Sutyā Yug!

The spot is very holy. Here Rama's grandfather was tending cattle, when the cow Nundnee prophesied the incarnation of Vishnu in the person of Rām Chunder. Hence went Gautum Rishē and announced the fulfilment of the prediction to Rāmā. Hither came Rājās Bhurt and Sutrooghun to see the place where their grandfather had tended cattle, and took up their abode in it as ascetics. Rāmā deputed all the gods and Rishies to persuade his brothers to return, but so pleased were they, that they also remained. The divine beings hollowed out a basin in the sandstone rock beneath, for the due performance of their ablutions. It is called the *Suhesrah Dhār*. Its waters purified Iudra from the effects of Gautum's curse and the hundred years famine ceased in consequence.

When the reign of orthodoxy was interrupted and the Dark Age commenced, Budh (*Kalee Ghun*) "enchanted† Sursutee, put "her into a pot, and arguing with the Brahmans, led them "astray." Whoever heard him, accepted his tenets. He converted all from the mountains to the plains, from East to West. The idols of the gods were smashed, and images of Pārisnauth placed in their stead. The revival was long coming. Fifteen hundred years ago, in the reign of Dhurm Pāl, when the quadrangular coinage was current, and the *granth* and books on medicine were composed, Shunker Acharj preached ritualism, the destruction of the new temples and the restoration of the old. During the period of religious reaction, the worship of Suhesrah Thākur was revived next to that of Shakumree Devee.

Again the Muhammadan conquest swept away the Thākur's cult, but in time a pious Jogee coming to the ruined Thākurdwārā setting up a hundred-armed (*suhesra bhoojee rūp*) idol, worshipped it. Now Huree Dās, a Bairagee of Bindrabun, chanced to visit him. The stranger, being a great pundit, consulted various authorities, and pronounced the image to be an effigy of Sutrooghun, not of Devee, as the Jogee thought. They argued the point earnestly, without being able to convince one another. Finally, the question was referred to the arbitration of another pundit, who decided in favour of the Bairagee. A second idol discovered there, turned out to be that of Bhurt. Huree Dās thus ousted the Yogee,

\* e.g. blocks of sandstones all chiselled, many skilfully carved, punched with holes for the reception of iron

clamps which bound them together.  
† Or "appeased by penance."

and from him proceeded a line of Mohunts, adherents of the Vishnuvee sect.\*

No systematic worship of the Jumna appears to exist nearer than Delhi. This relieves me of the task of explaining her place in the Hindoo theogony.

Although the Saharunpore mythology is rich, the doctrinal ideas of the common people do not extend far beyond a vague belief in the existence of a supreme Deity (*Purmeshwur*) and a sense of obligation to visit Shâkumree Devee or Hurdwâr, once in their lives. Saints occasionally monopolise attention.

*Pyârâ Jee* is the favourite of one section of the population. His temple is at Rundewah, the parent (*theeka*) village of the Dâpah Goojurs, equi-distant from Nukoor and Umbelhtuh. His grandfather, Râm Jee Pudârut, born (1545 S.) at Durgunpoor, pergunnah Burhânulh, Zillah Mozuffernuggur, disappeared immediately after birth. The consternation of the infant's father, Sâjun, Bâdhfurosh, was, as may be imagined, great. In six days, however, he mysteriously reappeared, and his mother made a sacrifice to the gods by way of thanksgiving. The subject of this extraordinary phenomenon, not exhibiting signs of any remarkable precocity, was afterwards commissioned to watch cattle. One day his herd straying into a sugar-cane field, destroyed the crops, according to the statement of the owner, a Rajpoot, who lost no time about lodging a complaint against the offender. An official, deputed to make a local enquiry and estimate the amount of damage done, reported that the crop was intact. Recollecting the antecedents of Râm Jee Pudârut, every one cried a miracle—a miracle! The lad, believing in his own supernatural powers, gained over many disciples. Nor did he neglect worldly considerations. He took unto himself a wife from the family of Bāwanee Dās, Bâdhfurosh of Khoodee-Shikârpore. The fruit of their union was Rugnauth, who married a lady of Sârun. The fame of Pyârâ Jee, his son, reached Sreenuggur, and the Gurhwal Râjâ gave him five villages.

About the same time, there was a feud between the Goojurs and Brahmans of Sudderpore, and the former, having invited the obnoxious Levites to a feast, massacred them during the entertainment, (temp. Akber). The murdered men revenged themselves in the form of vampires, *rakshusas*, leaving their enemies no peace. The predicament of the Goojurs was so serious, that Birâl Dâpeh, hearing of Pyârâ Jee's reputation, besought him to take Sudderpore under his protection. The saint at once said the village had been his in a former birth. The discovery of a well dug,

\* The Mahrattas assigned Deen-râpoora, pergunnah Hurowrah near Gungulheree, to the support of the

Thâkur dwârâ, rent-free; Mr. Moore, Collector of Saharunpore, resumed it.

by him proved the correctness of the assertion to everyone's satisfaction. He then willingly returned to claim his property, and expelled the demons. The prosperity of Sudderpore straightway returned. Its name was consequently changed to Undeva (*Un*—grain; *deva*—giver, from its abundance;) of which *Rundeva* is a corruption. Pyârâ Jee died there. Prayers are repeated and offerings made before his cenotaph. His son, Lâl Jee, having no male issue, bequeathed everything to his wife. Jádâ, Bairagee, managed her affairs as *Mohunt*, and the zemindars elected one of his *chelas*, Hur Gobind, to succeed him. Ever since, the appointment has been in the hands of Bâdhfuroshes descended from Madâree, brother of Pyârâ Jee, and of the brothers of his son's widow. They own one-third of the village, the *Mohunts*, two-thirds. The saint's followers are Vishnuvites and wear black necklaces. His holiday is the 6th of the dark half of Cheyt.

*Devee Poolumdeh*.—Another Goojur shrine is at Bilâspore, south-east of Luknaotee, south-west of Gungoh. A fair is held there in Asâr. People from Mozuffernuggur, Umballa, and Kurnaul, attend. A large crowd never collects. Pilgrims keep dropping in all through the month. Their numbers are greater towards the end of the fair. Whether the being adored is considered a saint or an incarnation, seems doubtful. Three hundred years ago, Oomra, Goojur, a zemindar of Bilâspore, suddenly took to shaking his head about and exclaiming—"I am "Devee Poolumdeh—erect a temple to me—Ruttee Brahman will "be my priest—he and his descendants are to receive all offerings "made to me." The inspired voice was obeyed without question. About half a century ago, Sahiboo Mull, a pious mahajun of Bidowlee (zillah Mozuffernuggur) built a well near the temple for the convenience of worshippers.

*Googa Peer* is universally popular. He was King of Bheekanêr and, owing to some family quarrel, waged war against his brethren, among whom was Prithiraj of Delhi. He vanquished them with the assistance of Rutten Hâjee, whose Hindoo name and Muhammadan soubriquet denote the convert. The Hajee gave Googa an enchanted javelin, which shot hither and thither through the air of itself, smiting its owner's enemies. The diabolical instrument ensured the saint a victory. Prithiraj lost his life in the fratricidal contest, and Googa had himself buried alive through remorse.

This story shows the extent to which Muhammadan influences have affected the creed of the lower orders. The Chouhan hero, the valiant opponent of the invaders, himself plays the part of a Moslem rather than a Hindoo saint. Yet his standard bearers may often be seen resting on their way to the Gogâhul fair, in Gooroo Ram Rae's Thakurdwârâ at Dehra, a place odious

to the faithful. Notwithstanding the failures of our own missionaries, the mind of the commonalty contains a strong element of receptivity. Most nonconformists, therefore, admit the claims of Muhamadan peers to sainthood, but Googas are of a very indefinite nature.

In the month of Bhādon, his most appropriate devotees, Bhungees, come parading from all directions to celebrate the mongrel saint's holiday at Manukmow, a suburb of Saharunpore, carrying standards symbolic of the enchanted spear, and soliciting subscriptions. Agurwāl Buncas are their chief patrons.\* On the tenth day of the new moon, the standards are raised and the festival commences; it lasts two days; the attendance is large. Its origin is recent. In the reign of Mahommed Shāh, Kumlee Chumār used to fish in a neighbouring tank, from which he received some sort of a sign from heaven, together with a standard which he set up in honor of the *peer*. The rest of his family followed his example. At first there were only nine, now there are no fewer than twenty-four standards. Hindoos and Muhamadans alike join in the festivities.

*Bābā Kāloo*, is another mongrel. His worship is peculiar to such low-caste men as Chumārs, Kāhārs, Kumhārs, Sainces, Guderyas and Mehrahs. Jāts are also said to revere him. His history sounds very like an elaborate joke.

The fairies were wafting Solomon through the air, upon his throne. The monarch, looking down, chanced to see a young Kāhār girl heaping up manure on a dunghill. The sight disgusted him so much that he affected to stop his nose and exclaimed, "who in the world could marry such a dirty ugly little girl"! Soon after, however, desiring to take a bath he had his throne laid down by the edge of a stream. He undressed and inadvertently left his magic ring near his clothes on the bank. Scarcely had he plunged in, than a fish, jumping out of the water, swallowed the talisman. The fairies at once flew away with the throne, for the charm of the ring was broken. The king remained shivering behind in great distress. He eventually made a virtue of necessity and took refuge in an adjacent village, where he was hospitably received in the house of the very girl he had seen gathering dung. One day, the maiden's mother remarked to her husband, "you should marry our daughter to a man like our guest." This she repeated thrice. The mystical number worked, and Solomon said, "marry her to me, for you have spoken three times." The marriage was accordingly celebrated, and consummated, the young couple living in a separate abode. Some time after the king's father-in-law went to drag the river with a net; and catching, among others, the fish that had swallowed the

\*Elliott's Glossary, p. 401.

magic ring, carried home his prize. The fish being a large one his wife told him to give it to her daughter and keep the rest. When the girl cut it open, she discovered the ring, and gave the ornament to her husband, saying "'tis a beautiful thing and worthy of you." When their evening meal was over, the king put the talisman on his finger, the fairies appeared bringing in the throne, he seated himself upon it, and vanished never to return. His disconsolate wife was pregnant and in due course brought forth a child—Babā Kāloo. A stick decorated with peacock's feathers represents the holy personage.\* To this fetich trifling offerings are made.

Many other such superstitions, not to speak of ghost and demon-worship, prevail. They prove Hinduism proper to be a mere name. Brahmanism is something quite above the comprehension of the masses, whose degraded religious condition presents only one hopeful aspect. The greatest obstacle to the propagation of a true faith is a creed which, though false, still seems to meet the wants satisfied by one more pure. But the paganism I have just described, barely rises above the level of fetichism; it is then hard to understand why the mind of the nominal Hindoo should be invincibly prejudiced against the reception of a higher form of religion, and, as a matter of fact, Muhammadanism has been extensively accepted.

*The Suraogies or Jain Muth.* The last relic of Buddhism is the sect of the Suraogies. I have not been able to ascertain much about their tenets. They are either reticent or vague on the subject. Their fundamental article of faith is expressed in the duty of adoring Pārisanath. Number, wealth and cohesion constitute these sectarians a most powerful section of the community. All are enterprising traders and they boast the richest men in the district.† Their temples are numerous and continually increasing. The opening of a new one occasions a grand gala-day. Processions of ten thousand people solemnly instal the Idol. In 1845 it was considered prudent to guard one of these demonstrations at Saharunpore with a military force.

In 1856 the local police were equal to the occasion, but a collision between the detested Jain Muth and the populace was seriously apprehended. In March 1865, from 12,000 to 15,000 of these religionists assembled at Deobund, to consecrate a temple. Notwithstanding an immense display of ornaments ‡ on the part of the women, the absence of crime was conspicuous, and the

\* • His temple is somewhere in the Punjab.

† e.g., Baroomul Soogund Chund, and Paris Das, bankers of great local celebrity.

‡ Estimated by Mr. Jos. Morgan, D. C., at Rs 350,000. Some of them were literally loaded from head to foot, and seemed to wince under the weight of their adornments.

inhabitants of the town were far from showing signs of antagonism. The mercantile classes hung gaudy-coloured drapery over the frontage of their shops, and presented *sherbet* to the promenaders marching past. A community of professional interests most probably prompted these courtesies.\*

• The Hurdwar Brahmans, if questioned about the Jain Muth, drone out an incomprehensible fable. Tripur the giant (Asur) grievously persecuted the Gods. They, manifesting their glory, had recourse to Brahma, who said, "Go, petition Shiv Jee, he will help you. Tripur has obtained power through me; it is not meet that I should slay him." The gods accordingly applied to Mahadev. He also excused himself on the plea of Tripur's great charity (or righteousness) and bade them explain their grievances to Vishnu. When the latter heard their story, he observed: "Verily, this is a true saying, where religion (or virtue) is, there can be no sorrow (or pain)." The aphorism gave the deities little consolation, and they asked what they were to do to avoid perishing before their time.† Receiving no answer, they remained obstinately seated, determined to extort a favourable reply. Compelled to act, Vishnu deliberating within himself, ultimately hit upon a way out of the difficulty. He produced an eidolon (Mâyá) in the likeness of a man, designed to destroy religion. The phantom's head was shorn, its garments were foul, and it held a napkin to its mouth.‡ The figure standing with clasped hands before Huree, said, "Call me an Arputpū" (i.e., a follower of Budh), "and tell me what my business is." Vishnu answered, "Hear why I have created thee. I have composed a Mâyáshastr to delude Tripur. The book contradicts the *Sruttee* and the *Sruritee*,§ "the doctrine of the four castes and of the four religious orders.|| "Read the work, teach its tenets to thy disciples and disseminate them over the face of the earth."

Bhugwan created four Apostles of the new religion and taught them the apocrypha. They in turn were directed to instruct Tripur, and settle at Mārwar, whence the principles of the false criptures would be widely propagated. The Titan fell into the snare, and Shiv slew him.

Under the glorious rule of the Surujbunsies and Chunderbunsies, Buddhism was suppressed, but in the reign of Mahanund of

\* Another motive for politeness may have been fear. The Suraogies are regarded with a degree of respect quite disproportioned to their number. Many of them (e.g., a colony at Sultanpore) are Agutwal bunceas.

† Or "without a deluge."

‡ The orthodox Suraogie considers

it an offence to swallow even a fly by accident.

§ i.e., The body of the law handed down by tradition. "The heard and remembered."

|| Brihmacháree, Grihust, Vána-prasth and Sunyussee (or Bhiksu).



Canj, in the Kulow Yug or Dark Age, the heretics multiplied. The Brahmans were driven from the towns into the villages; only here and there, at a few particularly holy places, the priesthood received the homage due to them. The incarnation of Budrpádjee, Svām-Kārtic's son, gave the first blow to Buddhism. He did much towards re-introducing time-honoured rites and ceremonies. Brahma too became incarnate in the person of Mundun Misr, Budrpádjee's disciple, and won over a multitude of converts. Finally; Shiv Jee entered into the body of Shunker Acharj, and Vishnu into that of Pudmpād. The one preached the Gyānkānd, the other the Upāsākānd.

The re-establishment of the priesthood in the Punchpooree towards the close of the fourth century A.D., completed the Brahminical revival. Shunker Acharj's royal patron is variously called Soodunwā and Dhurmpāl. The Gusāens, Nirunjunies—or "men void of passion"—are his modern representatives. Their body corporate contains ten subdivisions; Tirth, Asram, Arun, Bun, Giree, Purvat, Sagur, Sursutee, Bharthee and Puree.

Some one better versed in the Hindoo scriptures than I, must attempt the interpretation of the myth of the Mâyá Shāstr; and try to explain the anomaly of making the giant Tripur—the inveterate enemy of the gods, use religion (*dhurm*) as a weapon for their persecution; or trace the connection between the birth of Buddhism and the war with the Titans.

The conclusion of the fable summarily lands us from the chaos of mythology upon the *terra firma* of authentic history, and emboldens me to offer some observations with reference to the alleged antiquity of Brahminism proper in Northern India. I am prone to discredit it altogether.

The history of the world does not afford a single example of a religion almost utterly abolished from the face of a vast continent and restored intact after the lapse of many hundred years, in opposition to another which had meanwhile supplanted it. Yet this is the paradox maintained by the Hindoo Levites. Were they to give a plausible and consistent explanation of the anomaly, their statements might carry weight, but far from doing so, they envelope the period antecedent to Shunker Acharj's advent in a cloud of fables, the methodical obscurity of which indicates design. Then the so-called reformer comes, and instantly the cloud breaks. The inquirer finds himself face to face with an historical fact. Of this the date of his mission assures us. "Fifteen hundred years ago," refers one to no very distant age, but attempt to look beyond that point, and darkness impedes the view. Any conclusion drawn from such evidence must be an "opinion," not the end of a chain of reasoning. Mine is based upon the only rational interpretation of which a "galimatias"

assumed to contain a germ of truth, is susceptible ; the revival is a fiction ; the change effected, instead of being a return to, was the corruption of an old faith. Every creed is subject to this transition. I admit a constant tendency towards Brahmanism from the very beginning, owing to the ritualistic instincts of humanity in every age and country ; I allow the religion a long infancy, but deny that it arrived at maturity until the end of the fourth century or later.

—Among other reforms credited to the Achârij, was the re-organisation of the four castes defined by Menu. Now, so precise a division of the population, if it ever existed at all, could only have been a temporary arrangement, maintained under such conditions as keep our own race distinct from the people of the country at the present day, and distinctions once confounded could never again have been clearly recognised. The Brahmans themselves are loth to acknowledge any pure Kshatriyas. Nevertheless, Shunker Achârij, they allege, renewed Menu's institutions in their integrity. This revival of an obsolete state of society is as fictitious as the resuscitation of a defunct religion. The one was impossible after the spurious reformation ; the other, before that event. Shunker Achârij, like other Brahmans, *preached* caste ; what he really *did*, was to frame a rubric more congenial to the anthropomorphic tastes of mankind than a purely metaphysical system.

Besides Shunker Achârij, several distinguished preceptors taught at Hurdwâr ; Pot'henusec who maintained God to be visible, Yugâparshma, who held the contrary, Devulu, whose principal doctrine was the efficacy of good works, \* and others of less note.

The similarity between the name of Gautama the founder of Misrpoor, and of Gautama (Shákya) the seventh Budha ; of Kaupileh, Shákya's birthplace, and Kaupileh, applied to the Ganges generally, † more especially to that part of the river running through the Máyápooree Kshetr, is striking, if taken in connection with the myth about the attempt of the serpents (Nágás) to drag Gunga down to hell and her propitiation of them, a story obviously originating in some remembrance of Budhistic ascendancy.

\* v. Ward ii. p., 4489.

† v. Tinnour's Memoirs of Jour. As. Soc., vol. vi. part I, p. 63, (Chinese account of India by Matwanlin.) "The river Hang or Gang, which some call Keapihle." The city of Kapila or Kapilavastu, Shakya's birthplace, must have been somewhere near the Gunduk, 1480 li, or about 250 miles, north of Benares,

but the kingdom of Kapilovastu may well have once extended to the upper course of the Ganges. In Hiouen Tshang's time, it had a circuit of nearly 700 miles (v. Mémoires de Hiouen Tshang, vol. ii., p. 309). Might, not an enquiry in the direction of Máyákot near the Barigar serve to elucidate the question of the site of Kapila ?

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The Nágás are the Takshac or Scythian race, and it is also remarkable that the Suttee of Máyá Devée—Shákya's mother—should commence the series of fables, composing the mythology of Hurdwâr. I can only point out these coincidences. The better-informed reader will judge how far they warrant the inference that the simple element worship of the Brimh Kund may have been affected by Budhistic influences.

G. R. C. WILLIAMS, B.A., C.S.

## ART. II.—WORDS AND PLACES.

*Words and Places : or Etymological Illustrations of History, Ethnology, and Geography.* By the Rev. Isaac Taylor.  
• Third Edition, Macmillan and Co.

WHEN the small volume, now under review, originally appeared, it was remarked in the *Saturday Review* that it was a work which stood alone in our language ; that there was “ no other work resembling it in any degree either in fulness of detail, or method of treatment. The subject is one, acknowledged to be of the highest importance, as a handmaid to “ history, ethnology, geography, and even to geology ; it affords “ wonderful peeps into the past life and wanderings of the human “ race.” During the year 1873, a third edition has appeared, revised and compressed ; and the price has been so reduced as to come within the means of the ordinary student, as a class-book and a book of reference.

As on such a subject it is safest to argue from the known to the unknown, the author has wisely commenced by dilating on the origin of names of places in the New World, the language, history, and origin of which can be identified beyond doubt, as being the creatures of yesterday. A marvellous tale is unfolded even within that short period, and a clue is, as it were, given to the principles, the tendencies, the affections, the weaknesses, and the unintelligible errors, that have directed and accompanied the nomenclature of that new hemisphere which was unknown and unnamed in the time of the Plantagenets. Our chief object in bringing the subject before the readers of this *Review* is to induce some one to apply the process, which has been so fully worked out by our author as regards America and Europe, to Asia, and more especially to British India.

How much do those whose career in India is over, for whom that wonderful country is enveloped with the romance of the Past and the Unforgotten, regret that in the course of the quarter of a century, during which they were hurrying hither and thither, and engaged from morn to eve in work which has left little or no trace behind, wish that they had found leisure to store up in common-place books all that came under their observation regarding the ethnology and language and religion and other kindred subjects, of India ! The most casual observer and the shortest visitor must have been struck by the multiplicity and strangeness of the names of places in India ; but, until this book had

appeared, there was no model on which the information collected could be arranged, and it may not have occurred to many to reflect what a vast store of ethnical and philological information lies hidden under the uncouth and unintelligible sounds by which, according to the common consent of the inhabitants, the physical features and the local divisions of province, department, town, village, and hamlet, are known.

And yet it has been thoroughly admitted and acknowledged from the earliest times, that names were not originally given at hap-hazard, that they were not fortuitous concurrences of syllables; on the contrary, we find in the earliest records that have come down to us, an attempt to assign rightly or wrongly a meaning to particular nomenclature, and to account for not obvious names. Poetry and fiction, myth and tradition, were called upon for assistance. Thus in Genesis the name of "Bethel" is explained by the story of Jacob's Ladder, though the obvious meaning of the word was not hard to divine; and the Sanskrit poets delight to account for names, even for such a simple one as "Gangá," by a fanciful legend; nor were the more fastidious tastes of Virgil and Horace free from the infection, for while the former connects in most beautiful lines the name of Caieta—the modern Gaiëta—with the imaginary Nurse of Æneas, the latter has immortalised the tale of Europa, and surrounded with a halo of semi-truth the legend

"Tua sectus orbis  
Nómina ducet."

In most of the Reports of the Settlements of Land-Revenue in Upper India, an attempt was made to explain the meanings of the names of places, political divisions, and physical features; and with some success, for in truth the meaning of a large proportion of such names is obvious. A few were explained by scholars, a few more by fanciful stories or traditions of the country-side; but a considerable residuum remained, words which had in course of ages lost their initial and final letters, been inverted, or transposed; whose consonants had in the life of men been unconsciously changed by the action of Grimm's law; whose vowels had been absorbed, or altered by laws of accentuation which have not yet been fairly worked out. Yet, if once a sufficiency of facts were collected; if the character of neighbouring names were collated and contrasted; if the recurrence of similar names in whole, or part, in other parts of the country, and in other combinations, were duly weighed; no doubt the number of unexplained sounds might be largely reduced. This work commends itself to an ingenious and order-loving intellect, even if the elaborated result went no further than to explain the

phenomena of the names existing; but to any one who has studied Mr. Taylor's book, and who has entered on the subject with the zeal and penetration which it deserves, it will soon appear how very much lies beyond. The dry bones in the cabinet of the geologist may appear to the unlearned to be nothing but orderly arranged fossils; but to the initiated they are clothed with flesh, and from them he is able to conjure back past periods of the World which have left no other trace. So to the scientific philologist the names of places, which have lived from century to century on the lips of men, if rightly arranged, and rightly interpreted, cannot fail to disclose strange ethnological and political facts which were unwittingly entrusted to their keeping; and tribes, which have long since been extinct out of the land, have left behind them traces more enduring than their hill fastnesses, more deeply incised on the face of the country than their deep dykes, and more enduring than their coins. The pre-historic animals, slowly traversing the soft sands, left marks of their feet impressed on a surface, which has since hardened into rock, and which tells of the existence of animal life with a force beyond the reach of argument to gainsay; and in like manner, savage and migrating tribes in the early annals of mankind placed their phonetic impress on certain spots in their own peculiar combination of syllables, which have been severally adopted by the more civilised races which have succeeded to their inheritance.

This fact is most fully exemplified in North America, and if ever there had been an opportunity for making a clean sweep of the Past and commencing afresh on a *tabula rasa*, it was when the Western colonists landed in the New World. In the fulness of their civilisation, the heirs of all the ages, and the dispensers at pleasure of the treasury of names of ancient and modern Europe, the British colonists have founded a new Jerusalem, a new Rome, a new Tyre, and a new Troy; but they have been no more able to oust the indigenous names of mountain and stream from their lists of names, than they have been able to banish the black and red skin from their streets. Thus, side by side on their maps with the most celebrated names of Europe and Asia, whose composition can be traced back to illustrious Indo-European pedigrees, we have the Niagara, the Potomac, the Ottawa, the Rappakannok, the Susquehanna, and Arkansas, Wisconsin, and Michigan, which smack of the back-woods and hunting-grounds, and of a vocabulary and dialect, as far removed from the great Aryan family as the Chinese.

And more than this: we have, as it were, come upon the settling of the composite materials of American nomenclature while in solution, and, in the freshness of contemporary

knowledge, can assign with certainty the different elements to their proper origin, and, as it were, confirm the truth of the well-known colonization of the country by referring to the names of the locations, or, reversing the process, make the heterogeneous nomenclature intelligible by applying the unquestioned facts of history to it. This is the exceeding value of the American exemplar, for it raises a mere theory, or hypothesis, to the rank of a scientific process, and encourages us to place the name-lists of another world—for India is, indeed, a world of its own)—in the crucible, in the certainty of obtaining results equally satisfactory. But in dealing with the remote periods of Indian civilisation we can only use one process; we have the names, and from them must evolve by careful linguistic discrimination historical facts, and re-unite lost pages of a Nation's Annals.

We can safely arrive at this conclusion, that there are certain natural laws, which underlie the structure of human society, and the effects of which will surely crop out and leave traces, as being based on the simple and indigenous tendencies of mankind, on the general fitness of things, and the pressing necessities of rough life which have led and will ever lead new colonizers over the same tract. Thus, in fixing the name, which is done on the spur of the moment, of a tract, or of a township, or of a hamlet, or the separated portion of a village, reference will be had, first, to the rising and setting sun, the points of the compass, the upland and lowland, the river and mountain, the marsh and lake, the forest and desert, the wild animals of earth, air, or water; second, to the name of the tribe, the great men of the tribe, the tutelary deity of the tribe; third, to War, Peace, Plague, Famine, Death, the Temple, or the Place of Sepulture, or Cremation, and other events of local interest, which, as time passes and civilisation increases, will multiply.

Few settlements drop down on an entirely virgin soil: on the early settlement of Abraham in Canaan he found two layers of previous occupiers of the soil. Those who are unacquainted with Asia, can form no conception of the desolation and extirpation caused by Famine, War, Invasion; the new comers are usually unable to efface the footprints of their predecessors; some wretched hewers of wood and drawers of water—abject and servile survivors of the massacre, or the expulsion—remain, and they have their revenge in keeping alive the nomenclature of their forefathers. Wave after wave of population has swept over India from the great portal of the North-West; the proud Brahman—the Hindu of the Hindus—is as much an alien, and an immigrant, as the most modern swarm of needy Muhammadans; but Time has given a sanctity to his occupation, and his predecessors and victims,

the numerous non-Aryan races have perished from the page of history and have for centuries been forgotten.

Few newcomers have been bold enough to supersede existing names; at the best they have but added an alternative name, which has sometimes overridden, and sometimes succumbed to the old one. Thus Dehli and Agra have outlived Sháhjihánábád, and Akharábád, but Prág has succumbed to Allahábád. In *Holy Writ*, Ephratah is often coupled with Bethlehem, and Hebron is particularised as Kirjath Arba; and here a remark of our author's is most apposite. "In many instances the original import of such names has faded away, or has become disguised in the lapse of ages; nevertheless the primeval meaning may be recoverable, and whenever it is recovered we have gained a symbol that may prove itself to be full-fraught with instruction; for it may indicate emigrations, immigrations, the commingling of races by war and conquest, or by the peaceful processes of commerce; the name of a district or a town may speak to us of events which written history has failed to commemorate." And again "There are many nations which have left no written records, and whose history would be a blank volume, or nearly so, were it not that, in the places where they have sojourned, they have left traces of their migration sufficient to enable us to re-construct the main outline of their history. The hills, valleys and rivers are in fact the only writing tablets on which unlettered nations have been able to inscribe their annals. Mountains and rivers still murmur the voices of nations long denationalized or extirpated."

Mr. Taylor's work is divided into seventeen chapters; and prefixed to it is a map of the British Isles, showing by colours the proportion of settlements of Kelts, Saxons, Danes, and Norwegians, as arrived at by a careful analysis of the names of the locations. Appended to the volume is a list of some of the chief substantial components of local names, and two excellent indices, one of local names, the other of matters, without which the value of a work of this character would be greatly diminished. We propose now cursorily to survey these chapters, and on arriving at the last on "onomatology" to enter fully into Mr. Taylor's method and apply it to British India.

The first chapter is on the significance of names, and is an exordium to the work. It is justly remarked that—"what has been affirmed by the botanist as to the floras of limited districts may be said, with little abatement, concerning local names, that they survive the catastrophes which overthrow empires, and that they outlive devastations which are fatal to almost everything else. Invading hosts may trample down or extirpate whatever grows upon a soil, except its wild flowers



"and the names of those sites where man has found a home." How true is this! How often in the jungle, ruined wells and forsaken homesteads are come upon, which have a name and nothing else: how faithfully a name clings to a township, or a valley, or a countryside, when the origin of the name has long since been forgotten!

The usual origin of names is derived either from the physical features, or the historical associations of the locality, and in the course of ages, changes may have been wrought in both particulars, and the name, rightly interpreted, lets in a flood of light. How comes it, for instance, that one of the most northern counties in Scotland is called "Sutherland," but that it was so named as a dependency of Norway? How comes a portion of Kent and Sussex to be called "the Weald," but that it was once covered by a thick and impenetrable forest?

The second Chapter goes fully over what may be called the Tertiary Period, namely, that portion of the subject which falls entirely within historic times, such as the settlement of America and Australia. The Secondary Period may be said to comprise the strata of names which are capable of solution by reference to well-known languages, and to the Primary must be relegated that portion of the name-list of a country, which belongs to the dim twilight period of the settlement of the earlier races. It will be found that this division of the subject will be readily applicable to any new country, to which the inquiry may be extended, for it may at once be stated, that but a corner of the vast area, to which inquiry extends, has been occupied. It is not pretended that, as regards any country, except the British Isles, more than a general survey is attempted: if, indeed, information has been statistically arranged in France and Germany, what of the rest of Europe, of Africa, and of Asia, the last two continents in their entirety? But on the other hand it may be safely contended, that such a forecast of the subject has been made, as will greatly facilitate the labour of those who follow, and such principles have been laid down, as will tend to prevent future labours in the same field from being haphazard, erroneous, and fruitless.

Chapter III treats of the ethnological value of local names, and applies the method of research, illustrated and tested in Chapter II as regards the modern names of America to the more obscure periods of history in the older continent of Europe, and Chapter IV treats exhaustively of the primely important branch of the subject—"the names of nations." The value of this one chapter can scarcely be overstated, and its perusal will at once tempt the reader to go deeper into the subject by opening out new vistas of thought, ranging in order,

scattered information, long since possessed, but not appreciated, and convincing most unmistakably of the importance of the subject.

Chapters V, VI, VII, VIII, IX treat in succession of the different races, or nationalities, which have left their mark on the name-lists of Western Europe, to which geographical expression the subject is now narrowed. First, in order came the Phœnicians, then the Arabs, both being aliens from another continent. The subject seems thenceforth to shrink into still narrower territorial limits, and to restrict itself to the regions occupied at different periods of their history by Anglo-Saxons, Northmen of all kinds, and, at the dawn of historical knowledge, by the Kelts. No doubt it was of importance, or even of necessity, to narrow the subject, but it indicates by the exclusion of the Græco-Latin, Slavonic and Seltish races, how large a portion of even the Indo-Germanic or Aryan family is left unaccounted for.

Chapter X which is headed "The historic value of local names" does, indeed, give all that can be collected of the period of Roman occupation, and of the marks, which that great conquering, but not colonizing, people left upon subject countries. The Norman passed lightly over the ground, and left traces only in castles and abbeys and military or civil stations; the Saxons colonized in the proper sense by the extirpation, or entire subjection, of the Kelts; the Romans did in their times very much what the Normans did at a later period, and what the English now do in India. It may be a matter of sentimental regret, that in our haughty and supercilious disdain for the people, and carelessness for our own reputation we have never introduced any of the imperial terms into the plastic Urdu, such as road, castle, bridge, railway, telegraph, king or queen. The Romans were wiser or more fortunate in their generation, and have left the words *Strata*, *Castra*, *Cæsar*, *Pons*, *Hospitum*, *Colonia*, *Portus*, and others as legacies to all time and all nations, but no place of human habitation bears a Roman name.

Chapter XI treats exclusively of the street names of London, which, however curious and interesting to the local archæologist, are deficient in interest to the cosmopolitan reader. This is more than compensated for by the intense interest of Chapters XII and XIII, which treat of historic and sacred sites, and, as far as they go, bring out an abundance of very interesting facts, although they obviously only go over a small portion of the ground which might be traversed, for many a name now unintelligible records some forgotten event, or some deserted shrine.

Chapter XIV opens out a still more surprising view of the subject, for it shows how the physical changes of the globe are attested by local names. The sea has retired in some places,

rivers have ceased to be navigable; a town which was once a naval station, and a commercial port, is, perhaps, some distance inland; marshes have been dried up, or perhaps have extended themselves; in some rare instances mountains have sprung up, or have subsided; climatic changes have altered the products, or the fauna and flora of a country, and the names of the places when scientifically analysed, testify to a state of physical affairs, which is no longer applicable.

Reserving Chapter XV, we now pass to Chapter XVI, which in an exhaustive manner shows what words are derived from places; "All local names," our author says, "were once words; we have made these words, so long dumb, once more speak out their meaning, and declare the lessons which they have to teach. We now come to the converse proposition. *Many words were once local names*; we find these words in all the stages of the process of metamorphosis—some unchanged—some so altered "as to be scarcely recognizable." It is possible that there may be words in the vernacular, or dead languages of India, which, if properly examined, may give up an origin of this kind, in addition to those which have become notorious, and have found their way into European languages. Of these we select some familiar instances as illustrations. The word "nektarine" is most conclusively traced back to the superlative of the word "nek" or good, being the best of "peaches." The "peach" itself is from the Latin "Persicus" being a Persian fruit. The "damson" hails from Damascus, as well as the "Damask Rose." The "tamarind" is clearly "the fruit of India." Indigo, gamboge, calico, Cashmere are too obvious to be more than alluded to. In this chapter we have the whole subject discussed at very great length, but it is foreign to the main object of the volume under review.

Chapters XV and XVII go over the ground of the greatest interest to future investigators, for in the first the "changes and errors" are detailed, which have come to light in past times, and in the second, the principles, and method, of Scientific Onomatology are laid down, and on both these subjects we must make some remarks, before we proceed to apply the principles of some of the preceding chapters to Indian investigations.

We will first make a remark on the subject of "Changes and Errors." Any person with the most superficial knowledge of the Science of Language must be aware of the wear and tear which all words have undergone, as they have been handed down from mouth to mouth of succeeding generations. The names of places, if they have not suffered to the same extent as ordinary words, have nevertheless yielded to the all conquering influences of time: and, as our author states, "the influences are of two kinds: "The first is simply phonetic. A conquering nation finds it

"difficult to pronounce certain vocables which enter into the names used by the conquered people, and changes consequently arise, which bring the ancient names into harmony with the phonetic laws of the language spoken by the conquerors. Many illustrations of this process may be found in, \*Doomsday-book. The inquisitors seem to have been slow to catch the pronunciation of the Saxon names, and were moreover ignorant of their etymologies and we meet consequently with many ludicrous transformations."

"We have now to consider a class of corruptions which have arisen from a totally different cause. Men have felt a natural desire to assign a plausible meaning to names—to make them, in fact, no longer sounds, but words. This instructive causativeness of the human mind—this perpetual endeavour to find a reason, or a plausible explanation, for every thing, has corrupted many of the words which we have in daily use, and a large allowance for this source of error must be made, when we are investigating the original forms of ancient names. No cause has been more fruitful in producing corruptions than popular attempts to explain from the vernacular and bring into harmony with a supposed etymology, names, whose real explanation is to be sought in some language known only to the learned. Names, significant in the vernacular are constructed out of the ruins of the ancient unintelligible names just as we find the modern village of Mesopotamia built of bricks stamped with the cuneiform legend of Nebuchadnezzar."

Of the first influence we have notable instances in India: the town of "Thanesar" was formerly "Sthanesvara," "the seat of Siva;" "Benares" can be traced to "Varanasi," the junction of the rivers "Varana" and "Asi;" "Lucknow" to "Laknávati;" "Oudh" to "Ajodya," "the unconquerable one;" "Canouj" to "Kanhakubja," and so on to any extent. Of the second influence, we have instances in the alleged origin of the names of "Láhor" and "Kassur" in "Lava" and "Kusa" the two sons of "Rama." The law of phonetic change has been carefully laid down as between certain branches of the Indo-European family of languages, and is known as Grimm's Law, but it is capable of further expansion as regards other branches of other families. Mr. Taylor furnishes some memorable examples of the changes of names. Conspicuous among these are "Istamboul" for "Constantinople," "ἐς τὰν πάλιν" and "Stanko" for Cos, ἐς τὰν αὐτῆς. The whole of this chapter is full of linguistic anecdotes of marvellous interest and piquancy.

We now proceed to Chapter XVII, which though the conclusion of Mr. Taylor's work, would be the starting point of any hardy adventurer who is ready to open new and original soil.

Certain principles are worked out which must be attended to, if the subject is to be treated scientifically, and with any hope of permanent results. Any other method will lead to startling absurdities, or vague and unmeaning guesses.

*Firstly.*—It must be an article of faith, that local names are never in any single instance arbitrary sounds, but, however fragmentary the portion that has come down to us, there is a meaning to be extracted from it, if we can only get at it; this discovery was easy enough in the newly constituted societies of America and Australia, but is one of extreme difficulty in Europe, and, perhaps, it is in many cases wholly impossible in India, and the rest of Asia, in the present state of our linguistic knowledge.

*Secondly.*—The next requisite is to ascertain the language in which the name was given; this matter must be settled by geographical and historical considerations.

*Thirdly.*—The earliest documentary form of the name must be ascertained, and if two or more characters are in use, or have been used, it is of importance that the names should be set down with the minutest accuracy in all.

*Fourthly.*—If, as is often the case in India, the name has never heretofore been reduced to writing of a permanent or accessible character, endeavour must be made to record it correctly on the analogy of similar names, bearing in mind the laws of phonetic change, to which reference has been made.

*Fifthly.*—Attempts at interpretation must then be made, bearing in mind the grammatical structure of words, and the syntactical arrangement of the language to which the word is attributed.

*Sixthly.*—Consideration must be had to the possibly discovered interpretation of other names in the neighbourhood, bearing in mind the possible immigration at different epochs, of races and languages all of which have left their mark within limited areas.

*Seventhly.*—The linguistic result may be tested by topographical or physical considerations; if the interpretation brings out physical features, is it confirmed by the facts? If, on the other hand, historical features are indicated, are they confirmed by independent history?

Much must, indeed, depend upon happy guesses, or bold presumptions, verified by subsequent corroborating proofs, but the method proposed is at least a safe and scientific, and, as far as the lapse of years, and the confusion caused by the denomination of races and languages during long periods of, ignorance will permit, a successful one.

*Eighthly.*—A scientific analysis of names of places will surely lead to the establishment of this fact, that in far the greater number there are two component elements, which, for the sake of convenience, may be called the "adjectival," and "substantival".

elements respectively, and our author sufficiently establishes that it is of the essence of some languages to present the substantial element in the form of a "suffix," and in others of a "prefix" to the adjectival element; the word generally means road, bridge, ford, boundary, island, river, mountain, valley, dwelling or enclosure, as the case may be, qualified by a personal or descriptive word, denoting the possessor, the builder, or the relative position, antiquity, excellence, or other characteristic feature.

We will illustrate this position by quoting a few Teutonic suffixes, and Keltic prefixes, for in England, by a singular chance, we have the two practices side by side: A Teutonic location is known by the terminations of "ham," "ton," "hurst," "ley," "worth," "by," "den," "don," "combe," "sted," "borough," "thorpe," "cote," "stoke," "set," "thwaite," "holt," "bourne," "hill," "shiels," "stow," "wick," "fell," "law," "ey," "stone," "beck": on the other hand a Keltic location is identified by "aber," "inver," "ath," "bally," "kil," "llan," "ben," "glen" "strath," "loch," "innis," "inch." A full enumeration of adjectival forms would obviously partake of the character of a dictionary, but they may be grouped generally under one of the following heads: I.—Relative magnitude. II.—Relative position. III.—Relative age. IV.—Numerals. V.—Natural productions or features, such as animals, trees, rivers, rocks, minerals, and fruits. VI.—Names implying excellence or the reverse. VII.—Configuration. VIII.—Colour. IX.—Caste, religion or tribe. X.—Historical event.

It must be remembered that sometimes there is a consciousness of the meaning of the name, at other times the meaning is so entirely forgotten, that it is repeated in another language as the "*River Avon*" the "*River Esk*," "*Mon Gibello*," "*Pen-hill*," "*Wansbeck-water*," and many other *hybrid* compounds. It often may be a question whether the name is the record of a person or an event; thus, centuries hence, it may be a question whether the name Victoria scattered so profusely over the world records a victory, or a sovereign, or a state, or a railway station, or the name of the wife of some local authority.

How strangely names are altered merely by the rendering of the words from one language to another, is illustrated by the travels of Fa Hian and the other Chinese pilgrims who visited India for the purpose of local inquiries. Being men of learning and piety, they took the greatest pains to record the names of places and shrines correctly, and yet their works are a linguistic puzzle owing to the peculiarities of the Chinese language.

In extracting a meaning out of hitherto meaningless words; in awakening up echoes of history which have long since been silent; in conjuring up traditions, and in starting delightful ethnical theories, there is great danger, and the greatest caution must be used as

to the conclusions drawn, and especially in regard to the branch of the subject which relates to personages, who have often a mythical, or to speak technically an "eponymic" existence. "This phrase" is used to convey the suggestion that a personal name has been "evolved by popular speculation to account for some geographical" term, the true meaning of which has not been understood." In the annals of every country there have existed the wildest absurdities : France is said to have taken its name from "Francies," the son of Hector, and Britain from, "Brutus," a son of Æneas. The atmosphere of the Indian world is impregnated with the wildest notions, independent of all shackles of chronology, or probability, or geography. But there may be germs of truth lying hidden amidst a mass of traditional rubbish, and they are worth the trouble of extracting.

Taking leave of Mr. Taylor with renewed thanks for his interesting and meritorious work which may be destined to be the parent of many other works, for as yet only one corner of the subject has been explored, we proceed to throw out suggestions for applying the principles, worked out for a portion of Western Europe, to the original field of India. As regards Upper India betwixt the rivers Kīramnasa, and the Indus, we may say without fear of contradiction that a list of every hamlet, village, town, sub-division, province, mountain, river, and lake, can be supplied from the offices of Government in two distinct characters—the Semitic and the Devanāgarī, thus limiting the field of error by a system of checks. Many of these names have been reduced to writing for many hundreds of years, and appear in archaic forms in Sanskrit words. Much attention to the subject has been paid in different districts, but the information has never been collected together and grouped, and no serious scientific attempt has been made to solve the meaning of those names which have not yielded to the first attempt. It may be said that hundreds of the same names appear in every district, and some are repeated scores of times. Assuming roughly that there are sixty districts in the two great Provinces of Northern India, and allowing an average of one thousand villages to a district, we have an accumulation of sixty thousand names, which might be collected, arranged alphabetically, and brought under the examination of the scholar.

The number might be reduced, perhaps, to one-half by allowing for repetition of the same or similar names, and from the reduced number many may be deducted of well-known and obvious derivation ; a certain proportion will yield to a little scholarly consideration—and there will remain over a formidable residuum, of battered, clipped, and unintelligible counters, on the face of which no legend can be deciphered. This is the

work which has to be done, and to which we invite the attention of those who have the necessary knowledge and acumen, and can find the leisure.

It has been already stated that an intelligent knowledge of the language, in which the name was probably originally composed, is an essential feature of the inquiry. Without pretending to exhaust the subject, we may note the possible linguistic vehicles of every name in India.

I.—The non-Aryan tongues which have fallen to the rank of patois, which have little or no literature, and which are spoken only by people in the lowest stage of culture and social position; and yet these languages take precedence of all others in time, and it may possibly be found that the first comers had the privilege of naming for ever all the great physical features of the country, and many of the most ancient settlements. In fact they occupy the position of the Keltic or pre-Keltic names in Europe, the settlers with regard to whose existence there is no doubt, but with regard to whom history is silent, and the successive tides of whose immigration can only be detected by careful analysis of traces which they have left, “just as the ripple-marked slabs of sandstone record the tidal flow of the primeval Ocean.”

II.—The great Aryan family of languages, of which Sanskrit is the oldest and most finished type, occupy the Secondary Period. It is not pretended that Sanskrit ever was a vulgar tongue, but its place was occupied by a vernacular of many forms and varieties, but resembling each other in grammatical organization. The chief among these are the Hindi; the Urdu or Hindustáni, of a date subsequent to the Muhammadan dominion; the Bhruj, the Bengáli, the Panjábi, and the Hill patois; add to these Pushtu or Affghán of the Irani branch; and, turning Southward, Guzeráthi, Mahráti, and Sindhi. If the inquiry is extended to the Southern portions of the Indian Peninsula, consideration will have to be paid to the Dravidian family of languages, consisting of Tamil, Malayálin, Canarese, and Telugu. This great period, though not recorded in contemporary history, is well supplied with annals and legends, and literary documents.

III.—We now come to the great Historic or Tertiary Period, which divides itself into two portions, during the former of which the languages, into which new and larger life was infused by the great Muhammadan propagandism, predominated. By a singular chance the three languages of this category belong to essentially different families, and the degree of their separation is one that cannot be indicated by any measure of time within human knowledge of speculation. Admitting that mankind sprang from a single pair, it is not easy to speculate at what distant period, the Persian, a member of the Aryan family, the Arabic,



a member of the Semitic family, and the Tartar, a member of the Turanian family, separated; yet all these poured into India with different degrees of profusion within the Historic Period, and (though the organic structure of the three is essentially different), the same Dictionary, owing to the domination of Arabic words, might do for all, but with an Aryan organic structure alone. The latter portion of this period is occupied by the Christian languages, the Portuguese, French, English and Dutch. ‘

Thus much about languages; but cognizance must be taken of another great feature in the History of India. In Europe, by fair measures or foul; by reason, interest, colonization, or the sword, the Christian religion has succeeded in stamping out the ancient religions of the older world; whatever of the early Semitic cults the Phœnicians introduced into their European colonies; whatever were the beauties or the defects of the great and romantic state worships of Greece and Rome; whatever was the savagery of the Scandinavians, or the cruelty of the Druidical rites among the old Norse and the Celts; they have all long since perished. The great monotheistic idea of the Arabian Prophet made an analogous clean sweep of fire-worship and all the ancient fetichisms of the North of Africa and West of Asia as far as the Indus. But in India no such clean sweep has been made. As, wave upon wave, the new races were imported, or the new ideas were wrought out, they had, with some local and temporary exceptions, leave to expand, and have left their mark. Religious tolerance has ever been the common law of India. We have: I.—The primeval cults of the aboriginals, or earliest immigrants, by whatever name they are known. Often superficially ranged among the Hindus, they differ from them essentially; and the time has come when their language and religion must be recognized. II.—The great Brahminical polytheistic system. III.—The great heresy of Buddha and the subsequent Jain development. IV.—The great monotheistic dogma of Muhammad. V.—The Christian Faith. With the exception of the last, all those religious persuasions have left their mark on the nomenclature of Indian places.

A third feature is that of ‘races: in Europe we read of the Phœnicians, the Teutons, the Hellenes, the Latins, the Iberians, the Northmen, the Slaves, and the Kelts; all have left their mark, and many others, to mention whose names there is not space; without the historic knowledge of some, many names would have been unintelligible; of others the names themselves form the basis of historical hypothesis. So it is in India; the student must avail himself of the ethnological knowledge accumulated during the last half century. The very names by which some of the Provinces are known, or have in days bygone been known; the very name of India is suggestive of historical facts. One of the results of this

investigation into the meanings of names would be the preparation of maps showing by spots the comparatively sparse, or excessive sprinkling of names of a particular race or language in particular localities. In the book under review some very striking features of the extent of the Saxon and Danish Colonies in Britain have been exhibited by the contrivance of maps prepared in the mode above described.

• We now proceed to notice the most familiar of the substantival elements in Indian names. Prefixes are rare, but some few may be noted of an obvious character, and many more may come to light upon a close analysis of non-Aryan names, which have, by lapse of time or perverseness of articulation, been robbed of terminal, medial, and initial letters, and have hardened into rough monosyllables, or suffered capricious transposition of their composing letters. We note "Kilak," "Derak," "Chak," "Serái." The suffixes are more numerous, and the list may be considerably enlarged. We note "bas," "abád," "kót," "drug," "patán," "pur," "garh" or "gríha," "ganj," "kand," "pet," "gaon" or "gong," "shahr," "serái," "nagar," "bazár," "sur," "ghát," "pind," "tál." Human nature is true to itself in all countries, and these words represent precisely the class of objects, which we find a few pages back clothed in a Teutonic or Keltic dress.

We propose now to give some instances of names to illustrate each period—commencing with the latest, or Tertiary, where all is historically certain. Of the European names some are pure and unmixed with indigenous elements; some are hybrids:—of the first kind are Fort William, Fort St. George, Victoria Fort, names derived from England direct: Dalhousie, Amherst, Auckland Bay, Port Canning, Fort Hastings, Wellesley Province, Montgomery, named after Governors: French Rocks, Porto Nuovo, Port Blair, Diamond Harbour, False Point, Palmyra Point, explain themselves: we ourselves named a tract of newly recovered land in a far distant province, which we are as little likely ever to see again, as ever to forget, with the name of "London," and as such it will go to posterity, explaining its own imperial origin, unless some jealous successor has changed the name to Snooksabád or Smithpur.

As specimens of the hybrids we give Abbotábád, Campbellpur, Revell-ganj, Morell-ganj, Kydd-ganj, Barrackpur, Jacobábád, Edwardes-ábád, George-ghar, Captain-ganj, Frazer-pet, Birdpur, Bankipur, Malcolm-pet, &c. &c. From a linguistic point of view, there is nothing unusual or incorrect in these combinations, but what shall be said of the native name for Barrackpore, "Achának," from Job Charnock, the first English inhabitant!

There is a great variety in the form of the names used to indicate Provinces, or large tracts of country: we have one set of

Rohil-kand, Bandal-kand, Bhugil-kand and another Rájputáná, Ehatti-ána, Puri-ána, and a third Afghánistán, Beluchistán, Hindustán, Sistán : we have archaic names such as Anga, Banga, Carnata, Dakshina, Bhárata, Varsha, Maháráshtra. All these are tribal ; national, or political names ; but beneath them come names which can be traced back to physical features, such as Dún, Doár, Kohistán, Doáb, Mawur-ul-Nuhr (the two latter reminding us of Mesopotamia and Perœa, Antarbéd, Bar, Thul, Panjáb, Panjuad, Sind, Ságar, Sirhind.

Then comes another class of names, in which the evidence of artificial composition is most marked ; such as the well-known names for the four great Doabs of the Panjáb, which are actually found by a combination of the initial letters of their respective rivers : thus the country betwixt the rivers Báyás and Satlej is called the "Bist" Doáb ; that betwixt the Báyás and Ravi is called the Bari Doáb ; that betwixt the Ravi and Chenáb is called the "Rechna" Doáb ; that betwixt the Jhelam and Chenáb is called the "Jhach" Doáb. These names were well understood, and accepted by the people, and we are not aware of any country having names so thoroughly based on literary artifice. The same remark applies to the Province of "Dernjât."

An interesting chapter might be written to bring together all the lore connected with the names of Indian rivers and mountains. The six rivers of the Panjáb can all be identified with their Sanskrit names, which contain a meaning, and the Greek version of the names brought back by the historians of Alexander in an Hellenic form. The same may be said with regard to the Jamna, the Ganges, the Gogra, the Gandak, the Chambal, the Sone, which is described in Arnâs by the name of "Erannoboas," the Hellenic version of "Hiranyabuja" the other name of the same river, but both equally meaning "Gold."

We come now to the secondary or historic period of names of towns or villages. The audacious Muhammadans ventured upon the fruitless enterprise of giving new names to the ancient towns of India. The Romans dared to re-name Jerusalem as *Œlia*, and London as *Augusta*, and we know from history the amount of success which attended their efforts. In some cases, at least, the Muhammadan names of the great towns of India are concurrent with the old ones. Thus Dehli is known as *Shahjehánábád*, and Agra as *Akbarábád*, and Allahábád is still called *Prayág*, and Patna is known as *Azimábád*, and Chittagong as *Islamábád*, and Aligarh and Coel are exchangeable terms. Famine, pestilence, and war have periodically depopulated India, and thus new locations have been made on old sites, to which often an ancient name, still clinging to the soil, is vaguely attached in the traditions of the country-side. Here we have an innocent conflict

of names, but the same result has in many cases happened from fraud and violence.

Within the historic period the adjectival portions of the name can be traced to divers reasons.

• I.—Dynastic—The names of sovereigns speak out in Aurangábád, Ranjítghar, Sulimpur, Ludiánah, Jaunpur, and in our own days Dulipghar.

• II.—Official titles, applied by way of compliment, such as Sháhpur, and the other numerous compounds of Sháh and Rájá : Nawábganj, Wazirábád, Dewáanganj, Mullikpur, Imámganj, and a hundred others.

III.—Next come the personal names of the founders, the patrons, of which we can but give a specimen : Azimábád, Morádábád, Hushiárpur, Derah Fateh Khán, Begampur, Daranagar, Jaipur.

IV.—Another class owe their names to religious causes, such as Amritsar, Dharampur, Gurudáspur, Islámganj, Dharamsála.

V.—Next comes the "tribal" or professional name, though the specification has long ceased to apply. We have Gujerat, and Gujarpur, Mhairwára, Bainswára, Gorakhpur, Pathánkót, Gosainganj, and many others.

VI.—The names of deities, saints, heroes, and temples supply another very large class, and we need only quote Rámpur, Sítapur, Hardwár, Sri Rámpur, Pírnagar, Govindghar, as illustrations, when scores will occur to the memory of every one.

VII.—To record a conquest or a power of successful resistance ; of these we have Fatelipur, Jaffarábád, Ajjghar, Bijighar, Ferozabád, Ajodya.

VIII.—The abundance of particular products is a natural origin to a name, such as Gul-pur, Ambála, Bánsapur, Bághpur, Mahábban, Machhli-shahr.

IX.—A still more fertile origin of nomenclature may be found in physical features ; their name is legion, such as Pahárpur, Ghát-pur, Nahrpur, Daryá-abád, Safaidkoh, Dámankoh, Uncia Deh, Himálaya.

X.—Then come a vast class of cases, which come under no head, in which the name has been given much on the same principle that the ship-builder names his vessel "Polly" or "Joy." We have Anandpur, Fáizábád, Basantpur, Hamírpur, Bardwán, Chándpur, Pák Pattán, and the ubiquitous analogies of the equally ubiquitous Newton, Newhaven, Newport, indicating the poverty of the wit of the first settlers, unless perhaps, the name grew insensibly by the same process as the "East-end" and "West-end" of London are now growing.

XI.—Of another class of names some have no substantival, and others no adjectival element ; of the latter are Ságar, Mandi,

Hissar, Kót, Gahr, Tanda, Serái, Chak ; of the latter are Kási, Hazára, &c. &c.

XII.—Lastly, we may note the numerical prefix : as in Europe we meet with Dupont, and Zweibruck, Tres Tabernæ, and Three Bridges, Six Miles End, Sevenoaks, Nineelms, so in India we find Doberji, Tiwári and Trimukhte, Chár Mangal, Páñchgaon, and Panjáb, Hastnagar, Dassoah and Daska, Chaurasi, Hazára, Laccadwipa and Naulakki.

Passing on to the primary or prehistoric period, we have no assistance from history, and have to grope our way through the dim light of past years without a chronicle : in some cases we have linguistic analogies, or well-supported traditions, in others we have ingenious speculations : in a large percentage of cases, hopeless darkness.

There is sometimes poetry and sentiment in the names assigned, such as hasli, the necklace, to the native canal, which meandered through the Bari Doab, "a string of pearls at random flung" as "Mála Dwipa," the necklace of islands ; as "Karamnassa," the Sin-destroyer, implying that the river so called was a kind of Jordan, in which sinners could wash and be clean ; as "Yár Wifádár," the faithful friend to the Army, which marched down the course of the river, and drank of its waters ; as "Wah," the ejaculation of admiration at the beauty of the spot ; as "Jowála Mukh," the mouth of flame, a correct description of a Naptha well.

We find analogies to the nomenclature of Europe—the meeting of waters has given names to "York," and "Prág," and "Sangan" in the Bombay Presidency : we have already alluded to such words as "Newton" and "Neapolis" we have "Shahíd-ganj" analogous to "Merthyr Tydvill" : we have fanciful derivations, such as "Násik" from the nose of Suparnakka, there cut off by Rámá : "Kaithul" from Kapistal ; "Attock," the hinderance of the river Indus ; "Pesháwar," the advance guard of Indu : "Nabha," the omphalus, or navel of the Earth, a humble, but original, repetition of the Delphic boast ; "Rikhikes," where the Ganges fell from the tangled hair of the sage, and "Guangadwára" where it burst through the portals of the mountains. Even tombs have romantic names, such as "Táj Mahál," and "Anarkalli," the native of India talks of the whole of the world beyond India as "Wilayut"—"the province," and the place of transportation as "Káhipáni"—the "Black water." Other names occur to us, such as "Bungalow" the solitary house marked by the boatmen on the Satlej, as if the only one in existence, and the two small sacred lakes known as the "Eyes of the World." The names of rivers are rarely unique : we find repetitions of "Ganga," "Swan," "Tohi," &c., everywhere, being the shadow of the original term, which meant

"the river." But time and space would fail us on this interesting subject, and we must cease with this remark, that the name of "India" had originally a local signification, which was extended by the people of the West into a term for the whole of the known country beyond the Sindh or Indus : thus the term of Asia expanded from the environs of Ephesus so as to include a vast portion of the world ; thus the Greeks named the country of the Jews "Palastina" on account of their bitter acquaintance with the Philistines, their most deadly enemies.

Other cautions must be given. Words may have worn down to precisely the same form, but from entirely different originals : in England the suffix "wick" may in some cases be traced back to "vicus" and indicate only a village, and in other cases to "wic" a bay, where ordinarily bay-salt was formed by the process of evaporation ; hence the word has by analogy found its way to places, where only rock-salt is found. So in India the word "tope" may be traced back to "topi" and mean an island, or a plantation of trees, or "Shtupa" and mean a Buddhist tomb. Bahár comes from "Vihára" a monastery, and not from the word familiar as "spring," and the word "Medina" may have either a Semitic or an Indo-European origin. Many a pitfall is open to the unwary from this alternative of two distinct families of languages brought into constant hybrid connection.

Another snare may arise from too hasty ethnical deductions. The phenomenon of a large majority of the villages bearing the prefix of "Saht" must, and may probably with correctness, lead to the conclusion, that the district was first colonized by Christians, and in a remote corner of the world out of the passage of great tribes, and the occurrence of great events, like Cornwall, this may possibly hold good, but the North of India has been trodden down periodically by great locust-flights of nations, vast tracts have been occupied, laid waste, abandoned, land has become water, and water become land, the action of the mighty rivers have been such as is not conceivable to those who have not left Europe : thus wave of population has followed wave, and layer has overlaid layer, extending over a vast period of time. In the time of Alexander the Great there were great and populous kingdoms in India, while Britain was in a state of savagery.

Some definite results may be attained by a percentage analysis of local names within limited areas, as soon as the names have been sorted, and distributed in ethnical families. The occurrence of a vast number of substantival elements must lead to the fair inference of the existing settlement of sites, and boundaries dating back to the particular race, who have left their mark. Moreover the words used for divisions of provinces, or clusters of villages, may lead to results. It is established that the term

"Hundred" was introduced by the Saxon, the "Wapentake" by the Dane, the "Rape" by the Norman, and the "Canton" by the Kelt. May it not be that the local name of "Parganah," "Tapah," "Talorgah," and other similar terms can be traced back to particular epochs and races?

The chapters on "sacred sites" and "historic sites" are replete with interest all over the old world, which has a history. The names of "Battle" in Sussex and "Battle Flats" in Yorkshire, record the fact of the triumph of Harold the son of Godwin over Harold the King of Norway, and his own defeat and death a few days after. The name of "Slaughter Bridge" near Tintagel Castle in Cornwall tells us where King Arthur traditionally suffered his last defeat: "Sanguinello" still marks the spot of Thrasy-mene. In India we must not connect the numerous compounds of "Sekandar" with "Alexander" the Great, any more than the compounds of "Dara" with Darius, but Ibráhm Lodi, Humáyun, Akbar, Sháh Jehán, Jeháughír, Aurangzib, Farakhsir, and a host of the great men of former ages have left their names behind them. If we find no saints recorded, there are no less unmistakable evidences of religious feeling, in the compounds of Siva, Vishnu, Krishna, Arjan, Ráma, Síta, Lakshmi, Devi, Sadh, Gusain, Brahman, Ghayi, Pír, Sayad, and others.

In the thousands of towns, villages and hamlets of India, a wider field of available inquiry is thrown open than in any other country, if only the workmen can be found armed with knowledge, patience, and intelligence. Would that we were young to help in this work, as we were "Consule Planco," when we contributed to the *Calcutta Review* in its infancy, and went in to subdue and settle the newly annexed districts of the Panjáb. At any rate from the safe and long-wished-for retreat, where we have time to reflect on much that was not done well, and much that was left undone altogether, we think that we have not done wholly unwell, if in the service of ethnology and philosophy we have opened up the road by which younger and more vigorous spirits may advance.

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### ART. III.—THE TUB FABLES :—

*Being a Collection of Philosophic Tales of considerable antiquity  
with occasional Deductions for the use of unlearned Persons:*

#### I.

##### THE DISEASE OF HOPE.

**H** OPE, planting its foot upon knowledge and kicking away faith, became a vice in the heart of Florian, where it built innumerable airy castles, which could have had no foundation in any other place. As intoxication drags its victims into a false consciousness, hope forced Florian out of the world of realities into regions that were peopled with dream-pictures; and his moral perceptions, of which he had not many at starting—nor were these vigorous—were no less blunted by indulgence in hope than is the moral sense of a man ordinarily poisoned with strong drink. He became at last so desperately hopeful that he never allowed the gods a chance of agreeably disappointing him.

It is said of Florian that the king of the country, in which he hoped, once offered him an office of dignity and trust, to which were attached emoluments that would have ensured the life-long happiness of any man, and of many men possessing ampler talents than those possessed by Florian; but that he, whose dreams had far outstript the possibilities of life, turned away in disgust from the royal charity, and shortly after expired through starvation in an incommodious hostelry on a roadside.

*Corollary.*—Though hope deferred makes the heart sick, yet is it wiser to grow sick in the usual manner, even though it be unto death, than to harbour hopes which may not be fulfilled.

*Moral.*—Though it be wise and safe to allow experience to beget hopes, yet is it unsafe and unwise to urge hope to suggest facts.

#### II.

##### THE TORMENT OF EXPOSITION.

Barbican was born in squalor and bred in poverty, but suddenly rose to comparative affluence by the death of an ancient virgin aunt, of whose existence he had never so much as heard, until a letter from a notary instructed him that he had been raised in the scale of importance by a decent legacy. This legacy, which had sufficed to maintain many men of superior character in comfort for the natural term of life, took Barbican so much by surprise that, although it added largely to his resources—or more accurately, gave him resources, who had previously none—nevertheless failed to superinduce contentment. The surprise created by a



sudden access of wealth he found to be so pleasant, that he strove to perpetuate it by numerous contemptible devices. To Barbican's mind the consideration that he was credited with the acquisition of a fortune brought greater relief than the knowledge that he possessed some money. Accordingly, he set himself, with much diligence if with little wit, to the task of expending the moderate fortune he had inherited in endeavours to persuade his neighbours that he was a person of considerable resources.

In the country in which Barbican fooled himself and strove to deceive others, it was customary for people engaged in large commercial transactions to send letters of credit to each other by the hand of carriers; and a law of that country required that, for greater security of transport, all letters conveying remittances, of whatever sort, should be bound up in a cubit of silken braid of an expensive kind. The sight of this braid excited in the minds of the letter-carriers a sensation of honesty, whereof they were otherwise devoid; and the State compensated itself for the cost of its purchase by levying a tax on all remittances.

Barbican, who desired nothing better than that his friends and visitors should believe that he was constantly receiving letters which enclosed remittances of money, expended his entire inheritance in the purchase of bales of the silken braid, the which, when purchased, he cut up into pieces of the length of a cubit, and so sprinkled all over his apartments as to create in the mind of any casual visitor the impression that he was perpetually receiving remittances.

After he had exhausted his whole inheritance in this species of display, which won him some notoriety while it endured, he was glad enough to sell the fragments of the braid, at some small fraction of their original cost, in order to purchase some bread and ale, and to defray the expenses of a night's lodging at an inferior tavern, wherein he had before felt ashamed to picket a blind mare.

*Corollary.*—The suddenness of a change in the manner to which one is born is apt, unless it be disinfected of its abruptness, to confuse the faculties of men.

*Moral.*—They who come suddenly into a fortune, for which they have not toiled, must have a care to make no great difference in the ordinary habits of life, before they have grown entirely accustomed to the possession of wealth.

### III.

#### MIND AND MATTER .

The Smitherenes, a race which inhabited the North Pole, were a people of no little refinement and of considerable delicacy of

perception; but inasmuch as the art of writing was unknown among them, they at one time experienced much difficulty in effecting interchanges of ideas. The curse of articulate utterance was not indeed entirely withheld from them by Fate, but they had brought it under complete subjection; and they were so refined in their ideas, and so delicate in their perceptions, that all noise was accounted a moral enormity, and talking a public nuisance. They consequently passed each other in the streets, and stared at each other at feasts, thinking magnificent thoughts the while, but uttering nothing, whereby many germs of philosophy and flowers of eloquence were hopelessly lost to the world; until at last a youth named Jornells invented a device whereby one might commune with his neighbour, without being guilty of any indecent outrage. This device consisted in the representation of sentiments by means of pickled cabbages, the which when placed in one way on a platter signified one association of ideas, and in another, another. When a sentiment grew intensely fine, or it became necessary to evolve an abstruse deduction, an onion was thrown into the representation. In this manner, philosophy increased by communion, and great importance came to be attached to pickles and cabbages, as well as to the occasional onion; and many men, who were but gardeners and picklers began to assume the dignity of philosophers. "We," said they, "who provide the instruments which enable other men to exchange ideas that enrich the world, are clearly no less benefactors of the human race than they who merely amuse themselves with our handiwork. For whether is it easier to grow a cabbage and to pickle it, and to produce an onion on requisition, or, after these vegetables have been pickled and bottled, to lay them out in particular forms on a platter?" Having decided this question to their own satisfaction, the gardeners and picklers became men of great renown; and they may possibly continue to be so to the present day, unless the Smitherènes have abandoned their former conceits, or some inventor has discovered better instruments for interchange of thought and feeling than pickled cabbages seasoned with an occasional onion.

*Corollary.*—In an artificial society, less importance is attached to moral than to material interests; and brains are not of necessity a better patrimony than filthy lucre.

*Moral.*—Gross natures, by a law of gross nature, prefer material to mental excellence.

#### IV.

##### VIRTUE ITS OWN REWARD.

A Physician of Bœotia, having exhausted the resources of his science in assailing a disease which had fastened on the great

toe of a labourer, at last sent the labourer on a long sea voyage for a change of air, fervently hoping the while that the gods and the elements would between them make an end of a troublesome customer. The labourer, however, fell overboard on the voyage, and had his diseased toe bitten off by a shark; whereupon nature re-asserted herself in the remainder of his frame which was tolerably sound, and the man became healthy in a few days. His body, the whole of which had previously suffered from a little cause, at once resumed its former robustness; and the ploughman returned home in rude health—the physician gaining greatly in reputation by the miraculous cure. The shark, which had bitten off the diseased toe, was subsequently captured by a fisherman, who made over its corpse to a learned society in Athens, which caused the skin to be properly stuffed, and preserved, as a specimen of an enemy to the human race.

*Corollary.*—The foolish things of the world are often times chosen to confound the wise.

*Moral.*—But men, being reasonable creatures, sometimes know not whence they have been confounded.

## V.

### THE PLEASURES OF CONTROVERSY.

A Priest of the early Greek Church, by name Kaliphronas, once disputed with a heretic about the future consequences of sin. The priest maintaining that sin ensured everlasting torment, and the heretic contending that eternal life continued to be eternal life, whether it was happy or miserable, and that everlasting life was therefore the reward alike of sinners and saints, the controversy waxed warm and warmer, until the priest, who had authority in the realm, and considered fire a greater purifier of error than argument, had his opponent seized and burnt on the stake for his obstinacy.

"Oh Kaliphronas!" cried the heretic, as the flames encircled him and scorched his flesh, without daunting his spirit; "if thou hadst any conception of the discomfort I experience, and if thou hadst a spark of that commiseration for thy race, which thy master disclosed while on earth, thou wouldst less readily consign the majority of mankind to suffering for ever and ever." But in spite of what he uttered, the heretic was reduced to cinders; and the priest had the best of the argument. It is related that certain spectators of the holocaust whispered to one another that it was a pity that heresy was so foul a sin, seeing that even in its last extremity it was unselfishly concerned about the sufferings of others; but inasmuch as the power of the priest was paramount, and the stake on which the heretic was consumed seemed unavert-

ing, these sinful whispers miscarried at the birth. So, as has already been said, the priest had the best of the argument.

*Corollary.*—It is unsafe to argue, when your opponent can establish the superiority of his proposition by shifting his ground from theory to practice.

• *Moral.*—The tendency of all controversy is to confirm disputants in their foregone conclusions.

## VI.

### THE POVERTY OF NATURE AND THE WEALTH OF ART.

A little damsel of much shrewdness once enquired of her mother wherefore it was that boys usually ill-treated girls, whereas men of mature age invariably venerated women. The mother, not knowing in what form of words to meet the enquiry, replied uncertainly that she supposed it was an order of Nature. But the damsel quickly retorted that, if it were an order of Nature, the order must have been imparted when Nature first turned out her handiwork, and that her instructions ought therefore to be fresher in the minds of children than in those of persons of more mature growth. The mother, marvelling at the forwardness of her child, rejoined that this thing must be by reason of Art, which man had devised in order to modify Nature to his liking.

“ I clearly perceive,” then said the damsel who, though of tender years, was not so young that she might not think, “ that human creatures, being human, invariably seek and obtain whatsoever they may desire, and then proceed to justify the possession of it by the most handy excuse, but are never concerned to satisfy conscience, when they have any, whether that in which they delight is wrong or right.” The mother, not perceiving the drift of her daughter’s words, and their bearing on her own inconsistency, considered the girl a paragon of wisdom, whereas, if she had but understood her well, the damsel being young, she had probably given her some slaps.

*Corollary.*—Wisdom is often ordained out of the mouths of growing girls.

*Moral.*—Adult men and women often know not how recklessly Art has taught them to trample on the instincts inspired by Nature.

## VII.

### THE RELATIVITY OF INIQUITY.

It is related that in the country of the Puritani a very small quantity of sin was committed, but that, whether from the force of contrast or from its inherent vileness, what little sin was committed was exceedingly gross. The instincts of the righteous majority, however, had so far triumphed over the evil impulses of

the unholy few, that all individuals were bound by the law of the realm to denounce all iniquity, whenever they came across it.

It is said that Castalina, a maiden of spotless purity and great comeliness, while passing through the vestibule of a temple, witnessed an act of great impropriety. Urged by her conscience, as if had been taught by custom, to reveal what she had seen for the general good of the community, but restrained by her natural purity from wordng a sad secret, she was distracted by a mental conflict, which eventually unsettled her reason and destroyed her physical frame. So she died.

Castalina was cited by the theologians of her age as an instance of "invincible ignorance"; by the physicians, as a case of "mental aberration"; by the poets, who were not required to explain their sayings, as a proof that woman was made of man, and man in the image of the gods. Her mother, to whom her secret was unconsciously revealed in the paroxysms of her malady, persisted in believing that her spirit had departed to the heaven in which the Puritani believed, such as it was. Her father, who was a morose man, carved a statue to her memory out of fine granite, and used to gaze upon it with devotion; her brother never mentioned her name, though he often recalled her goodness to his mind, and sighed over it in secrecy; and her sisters were never married.

As the mother revealed her daughter's calamity to a few sympathising female friends, under a strict promise of secrecy, the story circulated rapidly among the Puritani, and at last reached the ears of the King. And the King pondered all these things in his heart, but held his peace.

*Corollary.*—Iniquity is relative, depending on accidents for its enormity.

*Moral.*—Rulers of men, who live by the breath of the favour of their subjects, are bound to acquiesce in all manner of popular delusions.

## VIII.

### THE FORCE OF EXAMPLE.

A boy, by name Impressario, who adored his mother but detested his father, inasmuch as the former always privately gave him some lollipops, immediately after the latter had publicly chastised him, was suddenly converted into a full-grown man, at his own request, which he had preferred at the shrine of the deity of mischief. In outward seeming a man, but still at heart a boy, he straightway possessed himself of a stout cudgel, where-with he lustily belaboured his father, exacting vengeance for many past sufferings. The mother, greatly grieved at this unfilial demeanour, and having fruitlessly remonstrated with her son, commenced to weep and wail; whereupon the boy-man, whose

mind had not been enlarged with his body, forthwith thrust a number of lollipops into her hand. Considering these sweets a sovereign consolation for the calamities of life, he was both surprised and grieved to find them fail of the effect which they had heretofore produced in himself.

"Was it because I was despised," he said, "that my mother, whom I have always loved, administered to me a remedy for suffering, which proves inefficacious in her own case?"

Having repeated this question aloud for a number of times without receiving any satisfactory response either from the gods or from his fellow men, Impressario entreated the deity, who had accomplished his metamorphosis, to restore him to his natural estate; and thereafter, this prayer being answered at once, he proceeded to abominate his father and mother alike, with exemplary impartiality.

*Corollary.*—The fruitfulness of example depends on the productive capacity of the mind before which example is held.

*Moral.*—True solace is that which calms the mind, without bribing the senses; the revenges of un comforted minds are embittered by pampered bodies.

## IX.

### THE CONVENIENCE OF CONVICTIONS.

In a country wherein the marriage of a man with the sister of his deceased wife was strictly forbidden by the law, a widower named Tarval was devoured by a passion for his sister-in-law during the space of ten years; during which he steadfastly petitioned the State to repeal the law, which it was his custom daily to denounce, with increasing vigour, as an unnatural and immoral restriction. Nor perceived he the incontinence of his desire, which it was his duty to have subjected to reason.

The sister-in-law, who was comely and desirable, constantly repelled her suitor, who, feeling assured of her affection, yet regarding her resistance as an evidence of her purity, grew more and more enamoured of the lady, and more and more earnest in his outcries for the repeal of the law, the enormity of which grew in his eyes, in proportion to the ardour of his love. One day, while treating the woman whom he adored with manifold attentions which she accepted with courtesy, but without warmth, Tarval suddenly made the discovery that her nature was insincere and that although her opposition to him had been inspired by a conscientious desire to satisfy the demands of duty, yet was she by nature incapable of appreciating or reciprocating an earnest love. Whereupon his passion, which had been fierce, abated, cooling down first into mere indifference, and next into actual contempt. Thereafter, he no longer clamoured for a repeal of the law which

interdicted marriage with the sister of a deceased wife, but on the contrary insisted with much eloquence on its retention as a safeguard of social purity, claiming also for the change in his sentiments all the merit which men attach to honest conversions. "That must indeed be an excellent law," he said, "which having steadfastly abominated for the space of ten years, I have at last learned to admire for its wisdom." And he also observed in a low tone to himself :—"True greatness of soul consists in this, that we be ever ready to sacrifice our prejudices, to confess our errors, and to be instructed by that greatest of all teachers, experience." Thenceforward, Tarval entertained a very poor opinion of his sister-in-law, and an excellent one of himself.

*Corollary.*—Passion is self-love in disguise.

*Moral.*—Indifference to genuine passion is self-love without any disguise.

#### ARGUMENT.

These tales of ancient days instruct men of all times, that, in all ages, human nature revolves on the pivot of self. Flesh and blood acquiesce in all laws which disturb the amusements of other people. Foreign intrusion into the domain of self is impertinence, if nothing worse. Display is sweet, especially when misleading. The approbation of multitudes is delicious, and never more so than when it is based on falsehood. Truth loves nothing better than a simple recognition. Honesty is scarce in the world ; Hyperbole abundant.

DIOGENES.

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## ART. IV.—BENGALI MUSIC.

- 1, *Sangit Ratnakar*.
- 2, *Seetar Shikya*.—By Krishnadhun Banerjea : 1873.
- 3, *Sangeeta Sara*.—By Khettra Mohana Gosswamee : 1869.
- 4, *Ghontrokhetrodecpika*.—By Kali Prosunno Banerjea : 1873.
- 5, *Sworaleepi*.—By Khettra Mohana Gosswamee.
- 6, *Jateeya Sangit Bishoyak Prasstab*.—By Surendra Mohun Tagore : 1871.
- 7, *Ackutana*.

THE first of the books above cited, *Sangit Ratnakar*, was sent down to me officially for report whether it was deserving of Government patronage by purchase, and whether it was fitted for use in schools in Bengal. My official reply of 17th May 1873 gave an opinion on these two points and also a sketch of the grounds of my opinion, and was printed by the Director of Public Instruction to whom it was addressed. Owing to causes, which will appear below, this official report of mine attracted much attention among the Bengalis and was the subject of several long letters in the newspapers. The present article is a re-issue of the substance of my official letter of 17th May 1873, in a somewhat different form ; with a fuller explanation of some points that have been objected to or misunderstood in it.

The other six books cited at the head of this article were sent me as presents, several by Baboo Surendra Mohun Tagore, and I have also received several private letters (some of them very violent ones) on the subject of Bengali musical notation. When I wrote my official letter of 17th May 1873, I had absolutely nothing before me except the *Sangit Ratnakar* (and this makes the coincidence of my general conclusions with those long ago arrived at by Captain Willard the more satisfactory), and it is only from these subsequent presents and letters that I have been made aware that there is a violent struggle now going on among Bengali musicians on the question what musical notation shall be adopted for Bengali music.

The *Sangeeta Sara*, published in 1869, boasts that in it Bengali tunes have for the first time been set down on paper ; and that the notation therein adopted is the invention of its author, Khettra Mohun Gossain. This system of notation is adopted in all the works cited at the head of this article (except the *Seetar Shikya*, which adopts the common European stave). The works, Nos



3, 4, 5, 6, at the heading of this article, are all issued in the finest type and are sent me splendidly bound. They appear to be issued by one party, and I am told that this party is a Nationalist party who wish to have as little to do with European devices as possible. The opposition party say that Seetar Shikya contains more than four times as much in a page as the Bengali notation would contain, and represents, as completely as do the elaborate Bengali treatises, every refinement of Bengali music. And by adopting, if possible, the European stave for the representation of Bengali melodies, the Bengali musicians, of course, would save themselves the labour of learning one notation more. A Bengali who knew no English might play a melody from an English or French piece of music.

The Nationalist party reply that Hindoo music employs smaller divisions of tones than the semitone, and that such smaller divisions cannot be represented on the European stave. In my official report of 17th May 1873, I, not knowing what a great dispute had arisen on this point, merely remarked that the Nationalist notation was cumbersome in the extreme. What I then thought was that, if it was essential to represent quartertones, some modification of the stave would be far preferable to the Nationalist notation. I have now no doubt but that the common European stave can represent fully the Bengali melodies and ought to be generally adopted.

The books cited at the head of this article, Nos. 2, 3, 4, 5, 6, are collections of tunes merely; and Aekatana is a collection of tunes for one concert, with short explanations of the notation added. But Sangit Ratnakar contains an elementary treatise on music giving the theory of the scale very correctly, and from it I was able to see easily that the Bengali fundamental mode is the same as the European major mode. For Sangit Ratnakar gives the vibration-numbers (or their inverse string lengths, the same thing) of the notes employed. Some Bengalis have been very indignant that I reported Sangit Ratnakar as the first treatise on music in Bengali, whereas Khettra Mohana Gosswamee published his book in 1869. It is true that when I reported Sangit Ratnakar as the first treatise on music in Bengali, I was not aware of the existence of Khettra Mohana Gosswamee's works, but my report was correct enough nevertheless. In England, until a comparatively late date, "learning music" always meant the acquiring of a certain habitude and facility of motion in the fingers of a young lady. The commencement of every science lies in definitions: the music books under review (except Sangit Ratnakar) do not even define the intervals of the scale, so that, except by getting a competent person to play over the tunes in them, it would be impossible to discover whether the scale used in Bengali

music was the same used in European music or no. It turns out to be the same, and this scale may possibly have come down from the time before the Yavans split off from the elder Aryan race. But I believe that the division of the scale into twelve semitones and not into any other number is forced by a numerical relation. As this was probably the only original point in my letter of 17th May 1873, I quote from it my demonstration:—

• “12. If we take any simple wind instrument whatever, of which we will call the fundamental note CCCC, we find that without employing any valve (or other contrivance for altering the length of the tube), we can blow the following series of notes:—

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
CCCC	CCC	GGG	CC	EE	GG	BBB	C	D	E	*	G	‡	Bb	B	C

The number of these notes we can blow will vary with the perfection and roundness of the instrument; with a post-horn we may blow the first four, perhaps, with a trom-bone the first eight or thereabouts, on a French horn the first 16 or (in a low crook) even more. If we take a string (under constant tension) the fundamental note of which is the same CCCC, we shall find that the string will give by harmonics (*not by stopping*) exactly the same series of notes *and no others intermediate*; and we may verify by observation, that the series corresponds to the breaking up of the string into nodes exactly corresponding to the numbers written over the notes; thus when the string vibrates in 9 equal segments, the note sounded will be D.”

“13. The intervals between the lower notes are so wide apart that the only melody that can be produced on them is that of a post-horn or hunting-horn, and the higher notes (numbered 14, 15, 16, &c.) can only be squeezed out of a good horn by great exertion of a skilful performer. It hence comes that the “natural register” of simple instruments in early times lies from GG to G or thereabouts; this is, in fact, the compass of Handel’s trumpet and French horn.

“14. This leads naturally to viewing C (No. 8 above) as the key-note of the instrument standing in the middle octave, that actually in use for melodies. This leads us to the inverse regard of the scale, *i.e.*, the doctrine of the grave harmonic, the foundation of modern theory. We observe that in order to compare the near relationship of any particular note to the key-note, we have merely to estimate the shortest multiple string of that which gives C. Thus the string double the length of C (No. 8) will only give the notes of the middle octave C, G; the string four times as long as C (No. 8) will give us GG, BB flat, C, E G.

“15. This leads us to consider the notes given by the string *thrice* the length of our C (No. 8); this will give us one new note between E and G (the F of music) which is not exactly our note

(marked as \*) which we got by forcing our original string to vibrate in 11 segments, though near it; and it will also give us another note between C and B flat (the A of music) which is not exactly our note (marked as †) which we got by forcing our original string to vibrate in 13 segments.

“ 16. It is obvious that our new note F, is related to the C above it exactly as our C was related to its G, and that our A is related to the F exactly as our E is related to the C.

“ 17. I here assume the elementary mathematical propositions concerning sound as given in Airy or Helmholtz; and assuming, therefore, that the number of transverse vibrations per second varies inversely as the length of the string, we have arrived already at the harmonic scale as under—

C	D	E	F	G	A	B flat	B	C
1	$\frac{8}{3}$	$\frac{4}{3}$	$\frac{3}{2}$	$\frac{5}{3}$	$\frac{5}{4}$	$\frac{7}{4}$	$\frac{15}{8}$	2

“ 18. A simple horn can thus, in a practicable part of the instrument, *viz.*, the upper octave, play the whole of this harmonic octave without any key; provided the open note \* $\frac{1}{2}$  be accepted as equivalent to our F  $\frac{3}{2}$  (difference of fraction is  $\frac{1}{2}$ , an error of about 3 per cent in the number of vibrations in the note), and provided the open note † $\frac{1}{3}$  be accepted as equivalent to our A  $\frac{5}{4}$  (difference of fraction is again  $\frac{1}{4}$ , an error of about  $2\frac{1}{2}$  per cent in the number of vibrations in the note). The musical ear will accept an error not exceeding a comma, which is  $1\frac{1}{4}$  per cent. in the number of vibrations of the note.

“ Practically in playing on wind instruments any one of the open notes can be played 2 or 3 per cent sharp or flat in the lipping, and the production of a *good* F on the trumpet is always a difficulty in the early study of the instrument. On the French horn the same difficulty arises, but the note may be eased with the bell; in the other note, A, the percentage of error is less, and there are other practical reasons why it is much easier to get it in tune.

“ The theory of the scale on which we are here at work is concerned chiefly with consideration of the F. The trumpet and the French horn of Handel played GG, BB flat, C, D, E, F, G, seven notes only, and they had played these notes for hundreds of years before, perhaps from Greek times, and a question may arise did they originally play our  $\frac{3}{2}$  F, or did they not rather play the open note  $\frac{1}{2}$ . In order that modulation in other keys may be possible, we shall shortly see that it is essential to make the F to be  $\frac{3}{2}$  and the A to be  $\frac{5}{4}$  (or near thereto), but a music which deals only with melodies, each in a fixed mode, could and perhaps always did accept as the scale the nine notes in paragraph 12 over which I have put the numbers 8, 9, 10, 11, 12, 13, 14, 15, 16. I have found

no Bengali musician who tuned his Sitara with such accuracy that I could hazard any opinion whether his F was intended to be  $\frac{3}{4}$  or  $\frac{1}{4}$

" 19. Our scale now stands so that	C :	E :	G :	C :
as	1 :	$\frac{3}{4}$ :	$\frac{3}{2}$ :	2 :
i.e., as	4 :	5 :	6 :	8 :
& we have also provided that the ratio	F :	A :	C :	f
as	$\frac{3}{4}$ :	$\frac{5}{4}$ :	2 :	$\frac{3}{2}$
i.e., as	4 :	5 :	6 :	8.

So that we have the relation that if we, with an instrument capable of playing our present scale only, commence with F as our fundamental note, a passage involving these notes only, we can play this passage harmonically in tune with F as the fundamental note equally as well as on C.

" 20. Similarly if G were our fundamental note we should have

	G :	B :	D :	g
as	$\frac{3}{4}$ :	$\frac{2}{3}$ :		
as	4 :	5 :	6 :	8

so that our scale is so far harmonically intune if we "modulate" till G is our fundamental note. In this case, however, we cannot, out of our existing scale, play the harmonic flat seventh, for C : B flat :: 1 :  $\frac{7}{4}$ ,  $\therefore$  the flat seventh to G will be  $\frac{7}{4} = 2.625$  not in our scale : but there is in our scale  $f = \frac{3}{2} = 2.666$ ; this differs by about 1.6 per cent in the vibration number, and this error being larger than a comma would be perceptible to a musical ear. A violin player could by stopping the string play either the note  $\frac{7}{4}$  or  $\frac{3}{2}$ , but in an instrument that only plays a fixed number of notes (like a piano) within the octave, it is impossible if it stands in harmonic tune in the key of C, but that it shall be harmonically out of tune in the key of G. This is a simple example of the so-called 'wolf.'

" 21. It is commonly stated that the vibration number for the minor third (E flat) is  $\frac{7}{4}$  and that for the minor sixth (A flat) is  $\frac{5}{3}$  : i.e., these notes are taken as harmonics of the string which is five times the length of the fundamental one. All this is extremely doubtful : in practice in modulations from the key of C, perhaps E flat comes in most frequently as the flat seventh to F. The editor of Sangit Ratnakar, is, perhaps, sounder as well as safer in treating these notes (as well as C sharp and F sharp) as filled in (either by the harmonic or the geometric mean), to make the intervals of the scale equal or thereabouts."

" 23. It is clear that if we divided the octave into any number n of divisions and our instrument having fixed frets can play n notes and no more, then in order that it may be possible that any

melody may proceed by modulations into other keys, the vibration numbers of the  $n$  notes must be  $1, 2^{\frac{1}{n}}, 2^{\frac{2}{n}}, 2^{\frac{3}{n}}, \dots \&c.,$  up to  $2^{\frac{n-1}{n}}$ ,

2. If this is so arranged it is clear that the intervals of  $2^{\frac{1}{n}}$  to the several  $n$  notes above it will be accurately the same as that of the fundamental note to the several  $n$  notes above it. If we take  $n$  arbitrarily, our scale will not in general contain the principal harmonic notes related to our fundamental note at all, and no pleasing effect can be produced.

" 24. But if we take the particular value  $n=12$  it is a most providential arrangement in nature that our scale so formed will include very nearly indeed, all the important notes of the harmonic octave, and it is this remarkable numerical relation that renders music in the European sense of the term physically possible. Were this not so, modulation would be impossible on instruments with fixed frets, and our melodies would have, like the Hindu, to be written each in a mode.

" 25. It is remarkable that no value of  $n$  other than 12 will include the E G and B flat till we get so large a value as 54. An instrument of the harmonium kind has lately been constructed with the octave so divided, and has discoursed music at the Royal Society: but the several notes are then so very close together that the effect is (to musicians of the present age) marvellous rather than pleasing. But the music of a future period may possibly be written in this scale.

" 26. The following represents the scale in use hitherto :—

Note.	Equal temperament, by calculating $2^{\frac{1}{12}}$ &c., to three places of decimals.	Harmonic scale.	Percentage errors in vibration number by employing equal temperament.
C	1	1	0
C sharp	1.059	1.054	.5
D	1.112	1.125	2
E flat	1.189	1.2	.9
E	1.260	1.25	.8
F	1.334	1.33	.07
F sharp	1.414	1.412	.08
G	1.498	1.5	.1
A flat	1.587	1.6	.8
A	1.682	1.666	.9
B flat	1.782	1.75	1.8
B	1.888	1.875	.7
C	2	2	0

"As the comma, a vibration percentage difference of about 1·2, is the smallest difference distinctly perceptible to musical ears, we are then led to the marvellous result that by tuning on equal temperament ensuring us an unlimited power of modulating backwards and forwards through the whole twelve keys on an organ or piano, we in no case produce a harmonic error sensible to the musical ear except in the one case of the flat seventh, a very important exception.

• "In placing harmonic values for many of the notes as C sharp and others, I consider them very arbitrary, and their near coincidence with the equal temperament values proves little ; but in the very important cases of the sub-dominant and dominant the error is only about  $\frac{1}{1000}$  of the vibration number.

The harmonic values of C sharp E and B are all minutely flatter than the equal temperament, and as these are all tuned as thirds in the old fashioned way of tuning pianos and organs, the old rule in order to distribute the wolf practically stood, tune your fifths (in the first three keys taken) true, and the thirds a shade sharp ; of late years the absolute equal temperament tuning for pianos, harmoniums, and organs, has come into general use."

Since writing this statement that equal temperament has been generally adopted, I have seen in the London newspapers a letter from Mr. Sims Reeves insisting that accompaniments ought always to be done harmonically in tune. It is true that in performing a comparatively simple ballad, which modulates only into one or two closely allied keys and back again the same way, the effect of doing it all harmonically in tune is delicious ; and with a string accompaniment something very near it is sometimes attained. But it will be quite clear from what follows below that in music with modern elaborate modulations it is impracticable to do it harmonically in tune, even with strings ; and the piano or organ must be tuned on equal temperament, for the old distribution of the wolf was found essential, and was only an imperfect effort to get equal temperament. I lately visited a rather remote mofussil station where the Commissioner's piano had been tuned by a military amateur. He had evidently tuned C sharp, F sharp, G sharp, as harmonic thirds and very accurately ; so that the sharp keys were all right : but in four flats it could hardly be believed that the right chord was struck. In short, though Mr. Sims Reeves may have written to the contrary, I believe that my statement that equal temperament is generally adopted is true.

Supposing that our key note is C ; a European common melody will often employ only the white notes of a piano : this is our common major mode ; if the melody modulates into the allied key of the dominant, it will employ probably also F sharp ; and if into the allied key of the sub-dominant, it will employ probably B flat. There are few tunes that have been whistled in the

London streets or sung by English congregations that carry modulation *in the melody* further. That is to say, out of the twelve semi-tones of the scale, our common melodies employ seven notes or at most nine only. And taking C as our key note all our common melodies (*i. e.*, those in the major key) employ the same seven or (generally) the same nine. The seven are reckoning from C, *in semitones*,

1, 3, 5, 6, 8, 10, 12.

Now Bengali music employs the same octave and divides it into 12 semi-tones as does the English : and it employs also seven notes only of the octave in simple tunes, nine in more elaborate tunes. Further, the commonest (what I have called the fundamental) Bengali *mode* agrees altogether with the European common mode above.

In European modern music we employ one other mode, the minor mode. In this, taking C as our key note, we also employ seven notes only out of the twelve semi-tones ; these seven being reckoned in semi-tones from C ascending.

1, 3, 4, 6, 8, 9, 12

and in melodies written in this mode at least two other notes, *viz.*, the F sharp and B flat, are often introduced in the major mode. Common European melodies, therefore, employ one of these two sets of seven notes : but it is clear that many other sets of seven might be picked : as the following :

1, 2, 5, 6, 8, 9, 12

which corresponds to

C, D flat, E, F, G, A flat, B

and in Bengali music this mode is actually in use, and below there is given an example of a tune written in this mode. Indeed the Bengalis in all employ 36 different modes, and this number does not by any means exhaust the combinations which may be selected of seven out of twelve.

I may be excused for offering some explanations here on very elementary points as difficulty has been found with my letter of 17th May 1873. The question of modes is quite different from that of keys. An English simple melody may be written in the key of two flats and then it may be "transposed" into the key of C. It will be found to employ the semi-tones—

1, 3, 5, 6, 8, 10, 12

measured from the key note whether the key note is B flat or C, or any other note in the octave. To put this in another form, you cannot find any English piece of music written in the key of two flats where those flats are D flat and A flat and further you cannot transpose any English tune so that it shall employ these two flats only.

I have said above that the *only* mode used in European music besides the common major mode is the *minor* mode. Some musical authorities reckon two "minor" modes, some as many as nine minor modes. The fact is that the European minor mode is not so definitely fixed as is the major; the descending scale is usually taken differently from the ascending which I have given above; but those who admit nine minor modes reckon in some of the very ancient church modes; these have descended to us from the Greek modes, for the Greeks employed a variety of modes as do the Hindoos.

Here I may explain again that I have been "corrected" by some of my critics for using the word "mode" instead of "key" in my letter of 17th May 1873. But I used the word "mode," because I meant exactly by it what the Greek word "mode" means, and something very different from what the word "key" means. My Bengali critics have been misled by the loose (or rather compressed) use of the word "key" in English music. We say that a piece of music is in the key of E minor, by which we really mean that it is in the minor mode and has E for its fundamental or key note. No confusion arises from this compression, as we have only two modes, but when we are thinking of a system which employs 36 modes, I found it advisable to use a more accurate and full form of expression.

In English harmony the intervals are counted, *but not in semi-tones*. Thus the interval of a "sixth" between C and A above it is different from the interval of the "sixth" between E and C above it. By this notation every thing depending on intervals, whether relating to modes, keys, or chords, is obscured. If chords are represented by the semi-tone notation their number is found to be very limited, and the eye recognizes, at a glance, many that in the ordinary notation are repeated under several forms.

Bengali gentlemen learned in music have always told me that English music was very good, as far as it went, but that it was all written in one of two modes, and was therefore deficient in variety as compared with the Hindoo music which employs 36. This statement is much more nearly true than I supposed before I worked through Sangeet Ratnakar. Even in the matter of modulation the Bengali melodies in the fundamental mode employ F sharp and B flat nearly as freely as do common European tunes. It is true that a European melody written in the fundamental mode can introduce and sometimes will introduce all the twelve notes in the octave, whereas the Hindoo tunes cannot; but common European melodies as a class have little more variety than the Bengali melodies in this respect. European music gains its variety by harmony which is scarcely employed in Hindoo music; and it appears historically that as the science of harmony has been elaborated, the ancient modes have gradually fallen into



disuse; the required variety being supplied by the modulations in the harmony. In Bengali music the only harmony employed is a drone bass: when a Bengali lady played to me Bengali tunes on a harmonium, in the bass she either kept down C the whole time or G the whole time, or played C and G by turns. It is very difficult to understand how the various 36 modes are pleasing to a Hindoo: melodies written in those to which Europeans are unaccustomed appear altogether outlandish to me. I cannot conceive that a European musician could harmonise these; and Captain Willard long ago wrote that many of these melodies (*i.e.*, those in modes unused in Europe) would baffle the attempts of the most expert contrapuntist to set a harmony to them. On the question, however, whether the superior plan in the abstract is to gain the requisite variety by variety of modes or by modulations in the harmony, it may be difficult to demonstrate that the Hindoo practice is wrong and the European right. Captain Willard evidently thinks that the European inability to enjoy melodies in modes to which they are unaccustomed may be a matter of education: and quotes "we are born with but narrow capacities; "our minds are not able to master two sets of manners or comprehend with facility different ways of life."

Hindoo music does not employ all possible modes of seven out of twelve notes as we have seen. And Hindoo music is very closely connected with the sitâra which may be called the national instrument. It is stringed something like a guitar; but is fitted with frets, and the strings can only be stopped exactly at these frets. The instrument, therefore, cannot play note like a fiddle but only isolated notes like a piano, each note separated by a definite fixed interval from the next. Some sitâras are made to play the whole 12 notes in the octave, and they are of course made with fixed frets. But the frets are then inconveniently close together, and the standard common sitara has some fixed some moveable frets: and when it stands in the fundamental mode, the upper string can play the notes here shown (the lower strings are hardly used except as a drone accompaniment).

The frets which are only a semi-tone apart are fixed : where there are intervals of a tone, the frets are made to shift. Thus when the sitára stands in the fundamental mode, it can *only* play the above notes ; it cannot play D flat for instance. But when it is wished to play a tune that stands in the mode of

C, D flat, E, F, G, A flat, B,

the two frets for D and A are each shifted down the neck of the instrument before the playing commences, and remain down during the whole performance of that tune. The sitára thus stands in the mode : and can be made to stand in any one of the 36 modes employed in Hindoo music. This connection between the sitára and the modes in use renders it certain that either the modes are derived from the sitára, or that the sitára has been invented to play these particular modes. This latter seems to me highly improbable ; and I stated in my letter of 17th May 1873 that the modes in use in Bengal are all derived from the sitára. One Bengali gentleman in a letter printed in a newspaper made a criticism on this worth preserving. He said my statement was quite wrong, because (as he proceeded to show in detail), the *names* of the modes are derived from those of Hindoo gods, &c. This Baboo's criticism is a curious instance of the delight with which the Hindoo mind tries to reduce everything to a question of words. In what sense this Baboo could have imagined that I supposed the names of 36 modes derived from the word sitára it is impossible to explain. Many a Baboo will hold a long argument with you in words maintaining that the banyan and peepul are male and female, and you will find it about as difficult to get him to define what he means by male and female as to induce him to examine the figs.

Three illustrative melodies are printed at the end of this article. The first two are taken from Sangit Ratnakar, being translated into English notation in my report of 17th May 1873 : the third is selected from Sectar Shikhya.

The first tune is in the fundamental mode, *i.e.*, the common major mode, and consists of two corresponding phrases of eight bars each, and each of these is again divisible into two parts of four bars each. All the sets of four bars so formed are constructed on a corresponding rhythm as to the time : at the end of the third and commencement of the fourth division the melody reaches a kind of climax, and that some climax of this kind should occur in this part of the tune appears very general in Bengali melodies. The peculiar arrangement of the time which occurs in the eighth bar from the beginning is also very characteristic of the Bengali tunes. It is repeated, for instance, three times in the second tune transcribed, and gives a hurried effect to the final

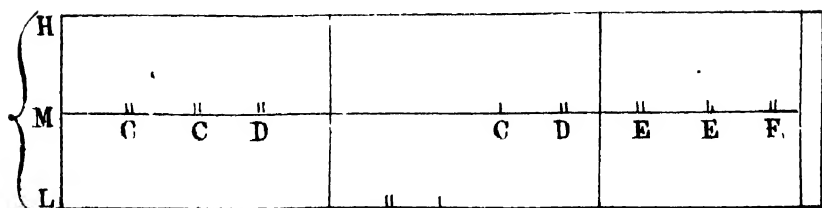
cadences. In European music the final cadence is generally arranged, so that we fall on the tonic at the first beat in the bar: in Bengali music the cadence is generally squeezed up so as to conclude on the fourth (up) beat of the bar.

This first tune transcribed illustrates another curious feature of Bengali melodies. It is in the fundamental mode and in the key of C, but it both commences and ends on B. In a Hindoo tune in the key of C there seems no disposition whatever to begin or end on the tonic: they seem to begin and to end on any note of the scale indifferently. In European melodies we end nearly always on the tonic and we begin on the tonic dominant or more rarely on the third. In the first tune transcribed, the second-half has a kind of swing in it to European ears provided the last note B be simply omitted and it be made to close on the C preceding. That a final cadence which does not close on the tonic should be as satisfactory to the Bengali ear as one that does, raises again the question whether the difference between European and Bengali taste in the matter arises merely from education and perhaps from inheritance, or whether it may not be possible to prove that the final cadence on the tonic is right by the nature of things, and the Bengali practice a perversion or degradation. I expressed formerly no opinion on this point, and it seems to me it would be very difficult to prove that the European idea was absolutely right, and the Bengali idea absolutely wrong in this instance. In singing, the European likes the clear full tone of the voice, the Bengali likes it "very sweetly" and through the nose. Perhaps even this is a mere question of taste also. Nothing is so repugnant to the Hindoo mind as any absolute conclusion. He likes to say on every possible point, "Well, I know that Europeans think so, but *we* think the contrary." He is quite liberal and willing to allow you your opinion, and only asks to be allowed to hold his own. Where he fails is that his love for leaving every question suspended appears to prevent his perceiving that on many points there must be absolute truth on one side or on the other. When he does perceive this, he instinctively shrinks from facing it. This tendency of the Bengali mind has been finely illustrated to me a hundred times in discussions on the native performance of music: for many Bengalis will maintain that the performance of a tune is done better by native than by European singers. It is little use that, you explain to them that the question whether the intervals are taken correctly is not a matter of taste but a question of fact. A native performer tries to rise an octave an interval of all others that demands to be taken accurately in tune, and will take it a quarter of a note flat nearly and then shiver on it. The Hindoo listener will sit and approve and enjoy it all the same. You may explain that

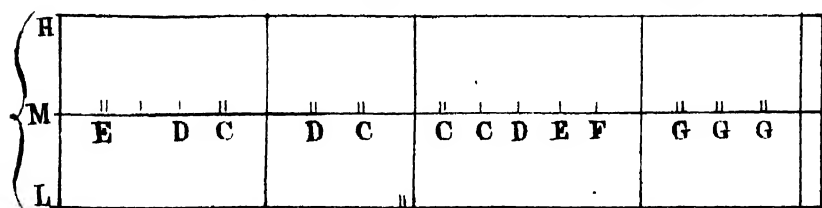
the siren (and many other instruments of precision) can measure the number of vibrations in a note, and can show when an octave is taken in tune, and can show exactly what percentage of the vibration number of the note the error amounts to when the second note is taken incorrectly. You may explain, therefore, that the question is one of correctness or incorrectness and not of taste. But I have rarely convinced my Hindoo. He generally says as of the banyan and peepul, "I know that Europeans think them different kinds of tree; but *we* think them the male and female of the same tree." In the discussions on the theory of the scale which have arisen on my letter of 17th May 1873, the Bengali critics again and again write "In European music such and such is the case," when the statement is in fact a merely numerical one and applies to all music whatever.

The second tune transcribed for illustration is in a favourite Bengali mode; and all the tunes in it sound to my ears like no music at all. The arrangement of this second tune as to the time is symmetrical enough; the first phrase contains two parts of four bars each; the second phrase contains four bars, and the three sets of four bars exactly correspond as to time. There is also a kind of correspondence between them in the intervals as though they were arranged in some primitive sort of canon, but I do not think there is much real approximation thereto. The outlandish mode in which the tune stands renders it very difficult to judge.

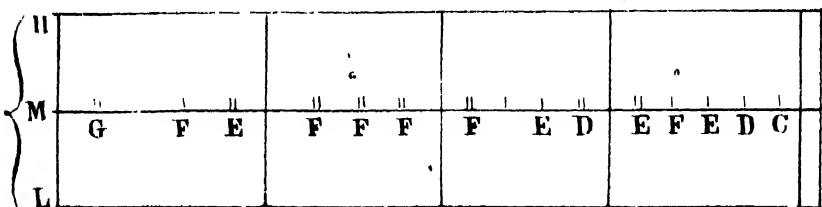
These two tunes from Sangit Ratnākar are somewhat of the nature of musical exercises, but they show fairly the character of the favourite Bengali melodies. The third tune taken from Seetar Shikhya quite at random belongs to the same *jāt*. There is the same kind of climax at the same point of the tune. It is written in a mode that I believe no European can appreciate, *viz.*, one flat that being D, which makes the final cadences queer. I have now travelled over most of the ground covered by my letter of 17th May 1873, and I now turn to the new points that have turned up in the criticism of that letter. The one that has been debated most warmly is that of the merits of the newly invented Bengali notation. These can be judged at a glance by the following which is reprinted *verbatim* from Ackatana and exactly gives the new Bengali musical notation in English letters:—

**GOD SAVE THE QUEEN.**

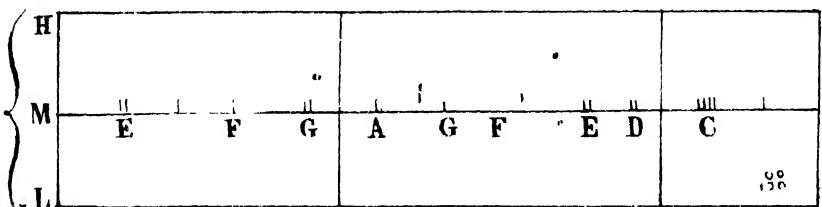
God save our gra—cious Queen, Long live our



no—ble Queen, God save the Queen. Send her vic-



to—ri-ous, Happy and glo—ri-ous, Long to reign



O — ver us God save the Queen.

It is unnecessary to comment on the crudeness of this scheme of musical notation. The occasional flats and sharps have to be marked above the uppermost line, as well as the various *seurs* and wobbles which are so freely employed in Bengali tunes.

The Nationalists who have been lately writing in the newspapers defend the Bengali notation (which by the way is not *the* Bengali notation, but an invention of four years' age taken up by a small but rich party in Calcutta) solely on the assertion that English music employs semi-tones only, that C sharp is the same as D flat in English music; and that consequently the English notation cannot represent the *shrooti* (mis-called by these writers quarter tones) used in Bengali music.

To this it is quite a sufficient answer to say that as the *shrooti*, whatever they are, have to be represented in the new Bengali notation by additional marks written above the notes, they can be similarly expressed by marks written above the stave of the English notation, and they are in fact so expressed in the *Saktar Shikhya* without any difficulty whatever, as everybody seems to admit except the small rich party interested in the Bengali notation.

I will, however, go more fully into the two strictly musical questions of the *shrooti* and of the statements that have occurred (in so many different forms) in the Bengali criticisms upon me that "in English music G sharp is the same as A flat."

Taking the middle octave of the Bengali scale *Moodara*, the distance from C to D is measured by the ratio of their vibration numbers, *i.e.*, as 1 is to  $\frac{8}{7}$ : the distance from G to A similarly as  $\frac{3}{2}$  is to  $\frac{5}{4}$ , *i.e.*, as 1 is to  $\frac{10}{9}$ : and the distance from A to B as  $\frac{5}{4}$  is to  $\frac{15}{12}$ , *i.e.*, as 1 is to  $\frac{5}{4}$ . That is the interval from C to D is harmonically exactly the same as that from A to B, while the interval from G to A is a little less. They are all taken as intervals of one tone each, and all my Bengali opponents speak of each interval as one tone. Now the tone from C to D is divided into four *shrooti*; the tone from G to A is divided into three *shrooti* and the tone from A to B into two *shrooti*. I therefore ask what is a *shrooti*: is it a "quarter tone" as my opponents usually denominate it: or is it sometimes a quarter tone, sometimes the third of a tone? If the latter alternative is selected, I think it may be demonstrated that music on such a scale is impossible.

I ask further how many *shrooti* are there between C and D in *Tara*, the upper octave, and how many between A and B in *Udara*, the lower octave? And in answering this question it must be recollected that the distance from C to D or (from A to B) is the same in every octave.

I ask further, if between G and A the distance is divided into three *shrooti*, does any one of the *shrooti* intervals coincide with

the semi-tone, or do the three shrootis divide the interval from G to A into three equal intervals ?

This leads us back to definitions. My Bengali critics assert that I do not understand what shrooti (or very sharp, very flat) is in Bengali music. How can I if the shrooti are not defined ? I want to discover the vibration number of these smaller intervals. Saugit Ratnakar gives the vibration number for the larger intervals so that I can understand exactly where he is ; but he does not attempt this in the case of very sharp, very flat and shrooti, and (as, indeed, I suspected before) for a very good reason. But my Bengali critics, while they go on piling heaps of hard terms about shrooti, &c., also omit altogether to define that of which they say I fail to discover the accurate meaning. Perhaps it is hardly fair that I should call on these gentlemen to state the vibration numbers of these shrootis, as I perceive they have not yet understood what equal temperament is. It is also impossible to challenge any Bengali performer to exhibit the shrooti on a sitara, for there are no frets on the sitara at the shrooti intervals so that the shrooti can only be performed by flicking the string, *i.e.*, altogether uncertainly. But let us treat the question practically : can *any* Bengali singer be produced who can sing the quarter-tones between C and D and afterwards the third-tones between G and A ? I will not say produced before me, as I am about to pledge myself to a total disbelief in the whole thing, but before any competent professor of music as Mr. Frye.

I shall be excessively surprised if any one Bengali singer can be produced who can even make the faintest approximation to success in such a feat, and I have heard many Bengali singers who appear to cause the greatest delight to Bengali musical audiences and whom I have been assured are among the most admired singers in all Bengal.

What I believe can be done is this : In playing the sitara the string can be flicked out, so that instead of a steady C we can have a sound that rises to the quarter-tone above (there or thereabouts) and descends again by a rapid slur to the C. This flicking of the string may accompany half the notes of a tune and produces the "twanging" effect which (to say the least of it) is highly disagreeable to English ears.

I feel convinced that the idea of shrooti has been arrived at from a mistaken induction, *i.e.*, by comparison of the distance apart of the frets of a sitara, and supposing that the harmonic interval between C and D bore the same ratio to the harmonic interval between A and B as the distance between the frets for C and D bore to the distance between the frets for A and B. A simple blunder. As to importing the shrooti into the squabble between the two notations, the progressive party says roundly

that it is merely an attempt to throw dust in the eyes : and it looks exceedingly like it.

I now turn to the assertion of my Bengali critics that C sharp is D flat and G sharp is A flat, &c., in English music. Now all that my antagonists mean by these assertions is that C sharp must be played as D flat on an ordinary English piano or harmonium tuned on equal temperament, and this is a mere repetition of words because the object of tuning a piano on equal temperament is that a note that is neither C sharp nor D flat may be played as either.

This misconception is almost part of the one I have explained above : the harmonic intervals are fixed by nature : it is no question of English music or of any other particular music, but a numerical one. Probably my Bengali friends will be surprised to hear that C sharp is never the same as D flat, that in instruments like violins that can be stopped any where, a note is played for D flat different from that played for C sharp and that as long ago as 1851 there was in the great Exhibition an organ with " buttons " between the black and white notes, so that a different note might be played for D flat from that played for C sharp. This organ did not succeed for reasons which will appear plain below. In passing let me ask my Bengali critics, if there is no difference between G sharp and A flat, why have European musicians persisted in using two symbols for one and the same thing ?

The numerical matter is simple enough, and my Bengali readers must not suppose that I imagine that I am writing something new in shortly explaining it. From C to E is four semi-tones and from E to G sharp is four semi-tones ; therefore to find the vibration number of G sharp (thus defined as the major third to E, using English phraseology) we have

As 1 is to  $\frac{5}{4}$  so is  $\frac{5}{4}$  to the G sharp vibration number, i.e., G sharp  $= \frac{5}{4} \times \frac{5}{4} = 1.562$  which is a number somewhere between G  $= 1.5$  and A  $= 1.666$  Starting fresh, from C to B flat is ten semi-tones and from B flat to the A flat in the upper octave is ten semi-tones also. Therefore (defining A flat as the flat seventh to B flat, using English notation) we have

As 1 is to  $\frac{1}{2}$  so is  $\frac{1}{2}$  to the upper A flat vibration number, i.e., the upper A flat  $= \frac{1}{2} \times \frac{1}{2}$  and putting it down an octave by dividing by 2 ; A flat  $= \frac{1}{4} = 1.531$ , a number lying between our G and A, but considerably different from what we got for G sharp.

If, with the author of Sangit Ratnakar, we take G sharp midway between the harmonic G and A we have

$$G \text{ sharp} = \sqrt{\frac{5}{4} \times \frac{5}{4}} = \sqrt{2.5} = 1.58$$

and the English-piano-on-equal-temperament-G sharp is from my old letter 1.587.

We have already, therefore, got a harmonic G sharp different from our harmonic A flat ; but there are, an infinite number of ways of

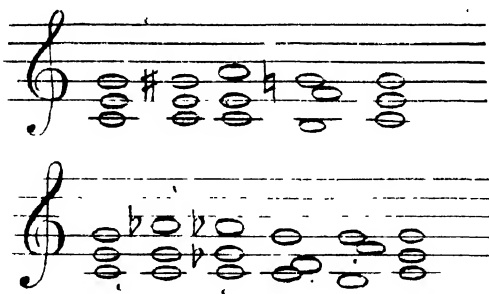


modulating from the key of C so as to arrive at an A flat, and from the existence of the "wolf" it follows that these different routes generally lead to a different A flat. It follows again from this that is proceeding from C you modulate by one route to one of these A flat, and then modulate back again by another route you will arrive at a different C if you take all your intervals harmonically true. No instrument therefore with fixed frets can possibly play strictly in tune harmonically, however many frets there are: hence the organ of the 1851 Exhibition above referred to proved a failure, and in pianos the almost universally adopted plan is to tune on equal temperament or at least to distribute the "wolf" by guess as equally as possible. Owing to the infinite number of harmonic notes that may be arrived at harmonically between G and A violins practically only make a difference between G sharp and A flat under particular circumstances and assumptions. By G sharp is understood the major third to E [which is also the leading note to A harmonically: for

[ G sharp ( $\sharp$ ): A ( $\flat$ ): B ( $\sharp$ ): upper C (2) ]

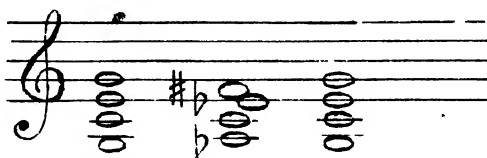
"And by A flat is meant the depressed sixth."

To show the use quite clearly, I will give two simple series of chords which start from the common chord in C, modulate so as to bring in *directly* this particular G sharp and A flat, and then return to the fundamental C chord.



In these two series the first two chords in each are identical on the ordinary piano, but they are written differently, because on the violin (or in singing) a different note would be given as G sharp than that given for A flat. For the G sharp, the leading note to A ( $= 1.562$ ) would be given; for the A flat some note very much flatter than the equal temperament note ( $= 1.587$ ) would be given though probably not so extremely flat a note as the A flat  $= 1.531$ , which we have calculated above.

I have selected this particular example, because many people imagine that it is always right to mark G sharp when it occurs as an occasional in any sharp key, and to mark the same note as A flat when it occurs as an occasional in any flat key. This is a good general rule, and many English piano-players imagine that it only means that a pleasing regularity is to be maintained to the eye by not mixing occasional flats and sharps in the same chord. The following series of chords is, however, very common and will break down this idea :—



Here starting from a common chord in C we proceed direct to one in which two flat notes and one sharp note occur: and the more correct writers always write the chord with an F sharp, not with a G flat when it occurs in this position. The chord is here really the chord of the flat seventh in the key of A flat : thus

[ AA flat) = half A flat =  $\frac{1}{2}$ , C = 1, E flat =  $\frac{2}{4}$ . ]

and we will take our F sharp or G flat or whatever it may be =  $\frac{7}{4}$

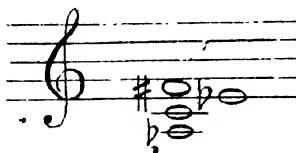
We then have AA flat is to C is to E flat is to G flat

as  $\frac{1}{2}$  is to 1 is to  $\frac{2}{4}$  is to  $\frac{7}{4}$

as 1 is to  $\frac{1}{2}$  is to  $\frac{3}{2}$  is to  $\frac{7}{2}$

as C is to E is to G is to B flat

so that our rather complicated looking chord



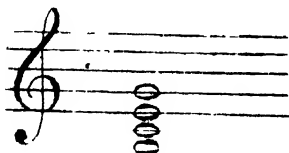
is merely the common chord of the flat seventh on A flat as fundamental note instead of on C.

But, to make it this we have taken our F sharp (or G flat as we have not yet settled how it ought to be marked) =  $\frac{7}{4}$  =  $\frac{1}{2} \times \frac{7}{2}$ . Now, our harmonic F sharp in the key of C major always means the major third to D which is equal to the leading note to G.

For major third to D is  $\frac{3}{2} \times \frac{1}{2} = \frac{3}{4}$  and leading note to G is to G ( $\frac{2}{1}$ ) as B ( $\frac{1}{2}$ ) is to upper C (2) whence also leading note to G =  $\frac{3}{4} \times 2 = \frac{3}{2}$ .

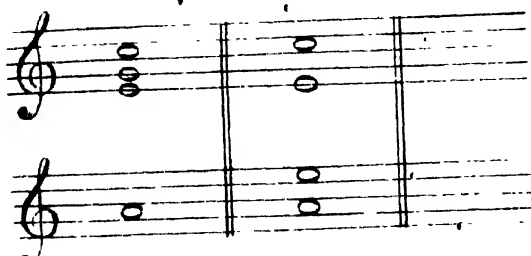
Therefore we mean by F sharp,  $\frac{17}{12}=1.406$  which only differs by six-thousandths from the very note we want to complete the chord under debate. We cannot, in fact, by any simple definition denote any G flat which comes so near the harmonic note we want so that we correctly write F sharp as above stated.

To diverge for a minute into harmony the chord



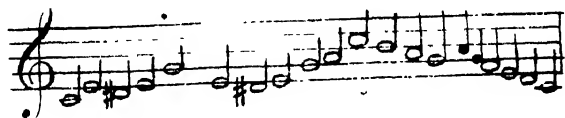
is made up of (GG) =  $\frac{3}{2}$ , C = 1, E =  $\frac{5}{4}$ , G =  $\frac{3}{2}$  and therefore the string whose length is four times that of C (i.e., the string which gives the note CCC, contains among its harmonics (called overtones by Tyndal) all the notes of the chord : therefore CCC is the fundamental root of the chord, and as it is not very remote from any of the notes of the chord, the chord is a simple one. Similarly the other chord is made up of (AA flat) =  $\frac{4}{3}$ , C = 1, E flat =  $\frac{5}{4}$ , F sharp =  $\frac{7}{4}$ , and therefore the string whose length is five times that of C, i.e., the string which gives the note (AAAAA flat) contains among its overtones all the notes of the chord, is not very remote from any of the notes of the chord which is thus again a simple one. And in the progression of the three chords the fundamental bass note merely moves through a major third and back again : (or as it may be put in another form) the string (AAAAAA flat) would contain among its overtones all the notes of both chords, hence the progression is not very complex or harsh to the ear as it would be were the fundamental notes of the chords less nearly related to each other.

The effect of the remoteness of the sub-harmonic root of a chord may be easily recognized by comparing the two subjoined arrangements of the common chord :—



the second of which the ear at once accepts as fuller and more pleasant than the first. The reason being that the root of the first is CC (*i.e.*, the string C C gives among its harmonics all the notes in the chord) the root of the second is CCC. In the organ a mild quint will sometimes produce quite the effect of a double: *i.e.*, if to a heavy 16 feet a somewhat lighter eight feet and a lighter four feet you add a much lighter 10 $\frac{2}{3}$ , the mind is so impressed by hearing the harmonics which would infallibly accompany the 32 feet were it played that it imagines to itself the 32 feet as being actually played when it is not.

I should add a caution that, in the above, when I speak of Hindoo melodies or Bengali tunes, I include only the class of music contained in the books cited at the head of the article. I especially do *not* include the melodies of the Hindoo boatmen which are of a totally different character. They are all in either the major or minor mode: they end on the tonic or occasionally with a cadence to the dominant (as do many of the Scotch national tunes) they commence on the tonic or fifth or less often on the third; and they employ occasional sharps and flats *that could not be played on the sitāra*: as in the following opening phrase of a favourite boat-chant:—



or in the following; in which, of course, the stroke of the oar comes on the first beat of each bar.



I think most Europeans who take the trouble to compare this with the best specimens in Sangeeta Sara &c will readily credit my statement in my letter of 17th May 1873, (which appears to have much angered my Bengali critics) *viz.*, that "while all "Hindoo musicians speak with contempt and almost abhorrence "of the boatmen's songs, I have heard many Europeans declare "that the boatmen's chants are the only music in Bengal "that can properly be called music."

I may add that the boatmen often sing very nicely in tune though their voices may be rough and their style uncultured, so that whatever the value of their melodies may be they gain much in the performance as compared with the performance of Bengali professional singers.

I could never make out the words that are sung to these boatmen's tune's, nor could I get anything that I could understand by making the boatmen repeat them. When, therefore, I had travelling in my boat Koylash Chunder Sain (Additional Deputy Inspector of Schools in Dacca) I got the boatmen to repeat the words to him. Koylash Chunder told me that the words were Sanskrit, that the boatmen very imperfectly understood them themselves, and gave me some account of the legend, of which I took no note. I mention this in detail, because, in my letter of 17th May 1873, I stated that my boatmen sang Sanskrit words, and some Baboo has written a letter to a newspaper in which he denies that boatmen ever sing Sanskrit songs. I know no Sanskrit, but I have known Koylash Chunder Baboo a good many years, and I think it highly improbable either that he was mistaken in the fact or that he purposely misled me.

The discussion that has arisen in the Bengali newspaper on Hindu music is entirely one of words except the struggle over the new notation. Their music-books abound in words and classifications of melodies. Then there are the arrangements of tunes according to seasons and the hours of the day. The amount of musical science that lies behind the cloud of words and prolix antiquarianism is very small. The Bengali writers continually refer to English "musical science," but no Bengali writer, whom I have read, can ever have opened any treatise on music whatever from Albrechtsberger to Ouseley; they understand by English music the notes on a harmonium and the explanation of the notation. They say that as to Hindoo music C. B. Clarke knows nothing about it, nor does he in their sense. I know nothing about the names and words; as to the music itself I have arrived at the conclusion that I understand as much as is worth knowing about it, and that nobody will ever get much more that is any use out of the Hindoo science of music than has been got out of other Sanskrit sciences. In this remark, again, I do not include the

boatmen's songs, of which I should like to see printed a good selection.

The present article has run to some length and is not very logically arranged. I therefore append here a short abstract of conclusions.

- Hindoo music employs the ordinary European notes. It employs melody only without harmony. It uses, besides the major and minor modes, thirty four other modes not used in European music nor appreciated by European ears. Hindoo melodies do not require a final cadence on the tonic or on any note in particular. All this was contained in my letter of 17th May 1873, and had been, it appears, all discovered long ago by Captain Willard. The only original thing in my letter of 17th May 1873, was the attempt to show that it is not a matter of chance that so many people have divided the octave into 12 (and not any other number of) semi-tones.

In the present article I have in addition concluded that the Nationalist Bengali musical notation is valueless and ought to be superseded at once by the stave. I have explained the difference between G sharp and A flat, which is by no means new. And I have given the method of finding the root of a chord by least common multiple which has, I believe, never been published before.

C. B. CLARK, M.A.

*The semiquavers indicate passing notes merely.*

## TUNE 1.



## TUNE 2.



## TUNE 3



## ART. V.—THE RICE\* TRADE OF THE WORLD.

- 1.—*Annual Statement of the Trade and Navigation of the United Kingdom with Foreign Countries and British Possessions, in the year 1870. Presented to both Houses of Parliament by command of Her Majesty.* London : 1871.
- 2.—*Trade and Navigation Returns of Bengal for 1872-73, and previous years. Published by the Custom House, Calcutta.*
- 3.—*Report on the Trade and Customs of British Burmah for 1871-72, and for 1872-73. Rangoon : 1872, and 1873.*
- 4.—*Published and Unpublished Papers of the Financial Department of the Government of India.*
- 5.—*McCulloch's Commercial Dictionary ; New Edition : 1871.*
- 6.—*Balfour's Cyclopædia of India, &c. Madras : 1873.*
- 7.—*Trade Circulars and Reviews.*

IN an article which was published in the last number of this *Review*, the writer brought together a few facts, which had been collected chiefly from official sources, regarding the internal traffic and distribution of rice within the Bengal Provinces. It was then suggested to him that it would be especially interesting to extend those inquiries and, if possible, place within a convenient compass such general information as could be acquired regarding the Rice Trade not of Bengal, only, but of the World. The present article is accordingly an attempt to comply with that suggestion. The attempt is an extremely imperfect one, owing partly to the difficulty of procuring accurate figures and facts in Calcutta which would be easily accessible in London, and partly owing to the writer's not having had the leisure to give to such an interesting and important subject full justice. This article has no pretensions to completeness, and can only be offered as a statistical contribution which may perhaps introduce a more thorough and exhaustive treatment at another time. It is indeed a circumstance of surprise that an authoritative Manual on a topic of such consequence as the Rice Trade should not already have been published, but the writer is not aware of the existence of any work of such a nature.

"The cultivation of rice," writes Dr. Balfour, "prevails in all the river valleys and on all the coasts of Eastern and Southern Asia ; it is a common article of subsistence in various countries bordering on the Mediterranean ; it is grown in the Japan islands, on all the sea coasts of China, the Philippine, and other large islands of the Indian Archipelago, in Ceylon, Siam, India, on both shores of the Red Sea, in Egypt, on the shores of the

Distribution of rice cultivation in the world and out-turn per acre.



Mozambique Channel, in Madagascar, in some parts of Western Africa, South Carolina, and Central America."

The cultivation of rice is not indigenous to America. It was first introduced in South Carolina from seeds brought from Madagascar near the end of the seventeenth century, but, from the careful cultivation to which it was subjected, it soon very far surpassed in quality and yield the produce of the mother country. The yield per acre of Carolina rice has been estimated to vary from twenty to sixty bushels, each bushel weighing about 45lbs. when cleaned. Each acre, therefore, yields an average of about 1,800lbs. of cleaned rice or more than 2,500lbs. of paddy. Under favourable circumstances, as much as ninety bushels have been raised from an acre or about 6,000lbs. of paddy. Carolina rice is sown in the spring and reaped in September.

Rice has been sown in the South of France near Bordeaux, and the experiment has proved a perfectly successful one. At Munzo in New Granada, the paddy-fields, which are not inundated, under the influence of a mean temperature, are said to yield one hundred-fold. At Piedmont in Italy and the plains of Lombardy, where the cultivation is extensive, it is said that the cultivators generally use about fifty pounds of seed per acre, and the usual return of a rice-field is reckoned at more than 2,500lbs. of paddy or about fifty for one. In Egypt, on the West coast of Africa and the islands of Bourbon, Mauritius, and Madagascar, rice is cultivated on damp soils, but not to any large extent.

In Europe, America, and Africa the cultivation of rice is, however, comparatively insignificant. It is in the inter-tropical countries of Asia that rice is of the very first importance, occupying the same place as wheat and oats and rye in Europe. Over the sea-boards of the peninsulas of India and China, in Japan and some of the Eastern islands, it holds undisputed sovereignty.

In India generally, it has been said, rice is produced in every variety of soil, at every altitude and in every latitude. On an average estimate the yield of one acre of rice in the fertile soil of Eastern Bengal has been taken to be about twenty-seven maunds of paddy or 2,214lbs.\* Rather less than two maunds or about 160lbs. would be the amount of seed required in these provinces for sowing an acre; and the produce may, therefore, be estimated at thirteen or fourteen-fold. The writer, however, does not doubt that this is rather an over estimate for ordinary Bengal produce. Twenty maunds of paddy or say twelve maunds of rice per acre is really a very good average outturn and a yield of seven-fold is an average beyond which few cultivators on an ordinary soil venture to calculate. In the North-West Provinces the average

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\* In the Soonderbun swamps of 36 maunds or nearly 3,000lbs. of Jessore the average yield is given at paddy.

yield of rice is reported to be little over ten or twelve maunds of paddy per acre or from 500 to 800lbs. of cleaned rice. In the Punjab the out-turn is estimated at 550lbs.; in Oudh at 649; in the Central Provinces at 207, and in Mysore at 1,577lbs. of rice per acre. It is presumed that these calculations are in cleaned rice, as it is impossible to suppose that there can be so small a yield as this of paddy or rice unhusked. The Mysore estimate, however, is apparently in paddy. In Mr. Dalrymple's Memoir on the Famine of 1866, it is asserted that the Revenue Settlement Department of Madras after inquiries and experiments, extending over ten years, had estimated that an acre of unirrigated land in the Madras Presidency produces on the average a yield of about 5 cwt. or 560lbs., and that an acre of irrigated land produces 10 cwt. or 1,120lbs. of cleaned rice. The yield of paddy is said to be double the yield of cleaned rice. In Sindh the out-turn of an acre is estimated at from 900 to 1,200lbs. of paddy.

In British Burmah it is reported that one acre will produce from fifty to one hundred baskets (maunds  $32/8$  to  $65/6$ ,—2,700 to 5,400lbs.) of paddy according to the class of land. On the best land somewhat less than one basket (54lbs.) of paddy will plant an acre; while on inferior land it takes more. The yield of paddy in British Burmah is, therefore, from fifty to a hundred-fold. The average on the Tenasserim coast is said to be only twenty-fold. In Siam, Cochinchina, and Java it is a common practice to exact two crops of rice yearly from the same soil, one in April and one in October, and an English acre in Java so cultivated has been found to yield an annual produce of 560lbs. of cleaned rice. In the same island an acre of good land yielding annually one green crop and a crop of rice was found to produce 941lbs. of clean grained rice or about 1,250lbs. of paddy.

It would not be difficult to reproduce many other calculations that have been made out of the out-turn per acre and of the remunerative quality of rice cultivation. To do so, however, does not fall within the scope of this paper, and it would, it is feared, be of little use, as the calculations are little better than estimates, and are often evidently very inaccurate. The writer will only say that the whole subject demands a more careful investigation and more attention than has hitherto been bestowed on it.

**•EXPORTS.**  
CAROLINA RICE.

Small produce and  
Exports.

Compared with the extent of its cultivation in the Eastern Hemisphere, the cultivation of rice in the United States of America has never been large. The American rice crop in 1843, which was the largest that had then been known, reached 40,125 tons. The largest crop that ever was known was in 1847 when 51,839 tons of South Carolina rice were raised. In 1848 the produce

reached 162,058 tierces or 47,026 tons in market of which 160,330 tierces or 46,524 tons were exported from South Carolina. But small as the American rice crop has always been, comparatively speaking, it has much decreased in quantity since the civil war. A letter from Mr. H. P. Walker, Her Majesty's Consul at Charleston, published in the *Times* of February 6th, 1874, contains some interesting information on this point. Mr. Walker's calculations are made in tierces but the writer has reduced them to tons.\* It appears that the entire average rice produce of the United States in 1870, 1871, and 1872 was only 12,364 tons, of which 9,741 tons were exported. The produce of 1873 was 14,294 tons, of which 10,932 tons were exported. The quantities exported were sent to the northern ports of the United States in part, and by rail, into the interior, in other part—in the proportions of about three-fourths to the first, and one-fourth to the last. The diminished yield of rice in Carolina is attributable to a variety of causes of which the foremost is said to be that the Southern States have not yet sufficiently recovered from the war to continue their rice cultivation. "Even were it prudent," writes the Charleston Consul, "to plant a crop without possessing any power to control the necessary labour—without any assurance that those who might plant would remain to reap—there is the further difficulty that the plantation cannot be conducted without much outlay. Funds for the purpose have generally been supplied by a factor on the credit of the crop to be produced. The capital employed in banking, before the war between the States amounted in Charleston to \$13,000,000 in gold. At the termination of the war there was nothing so employed. But since then such capital has gradually increased, till its present volume is as much as two millions and a half of dollars of like value, but it is, nevertheless, deficient still to the extent of ten millions and a half of dollars. Under these circumstances the facilities of bank customers, among whom the factors must be enumerated, are not equal by four-fifths to those enjoyed before the war. It is a matter of wonder that so much as a half of the rice lands formerly in cultivation still yield their accustomed annual returns, rather of complaint, that only so little is utilized; for the owners of the lands without the usual assistance given by the factors, cannot possibly in the present state of the labour of the rice section, undertake their cultivation." In addition, however, to the reason given by Mr. Walker, it is evident that the falling off of the

\* All calculations in weight have throughout this article been reduced to tons. The tierce which is used in the United States has been taken at 650lbs., the maund in India at 82½lbs.,

and the picul in use in the Eastern Archipelago at 133lbs. The figures of the official English and Indian returns have in like manner been reduced from cwt. to tons.

American trade is largely attributable to the increased supply of rice from Bengal and Burmah and to the comparatively lower rates at which the Indian produce can be placed in the home markets. The rice cultivation has moreover been displaced by the growing cultivation in America of cotton, tobacco, cereals, and other articles yielding a more profitable return. But be this as it may, the fact remains that the condition of American rice is now of no consequence in the home market and none of the home Circulars or Rice Reports now-a-days even allude to it.

A statement which is published later on in this article will show the exports, from the United States into the United Kingdom, of Carolina rice from 1854 to 1871. The total exports of rice by sea from the United States from 1866 to 1869 are as follows :—

*Exports of Rice from the United States.*

				Tons.
1866	...	.	...	3,864
1867	...		...	2,087
1868	...		...	5,316
1869	..		...	3,955

On the other hand the imports into the United States during the same four years are registered :—

*Imports of Rice into the United States.*

	From Great Britain, Tons.	From China, Tons.	From other places Tons.	TOTAL. Tons.
1866	... 9,653	15,371	. 7,473	32,507
1867	... 4,925	5,861	. 7,183	17,909
1868	... 8,515	8,155	8,648	25,318
1869	... 5,667	12,233	5,888	23,788

American rice, has, from the careful cultivation to which it has been subjected, acquired a quality far finer than that of any other rice. It sells in England, when procurable, at three times the value of the best Bengal rice. The superiority in the quality of the American rice is well known, and persistent efforts have been made by successive Governments of India since 1840 to introduce the Carolina varieties into India, with as yet, however, but moderate success. In Madras, Mr. Robertson has been able at the Sydapet farm to cultivate some Carolina rice very successfully. A table showing the comparative prices of rice in England, including Carolina rice, is given towards the close of this article.

In Europe there is necessarily not much rice cultivation, but the crop is grown along the shores of the Mediterranean and especially in the plains of Italy. The Italian exports are very considerable indeed, as will be seen from the the subjoined statement :—

Italian rice.

*Exports of Rice from Italy.*

	France. Tons.	Austria. Tons.	Turkey. Tons.	S. America. Tons.	Other places. Tons.	TOTAL Tons.
1866 ...	14,711	3,651	17,001	2,883	13,283	51,529
1867 ...	23,978	19,778	19,478	5,558	16,399	85,191
1868 ...	22,433	23,006	16,457	4,577	15,928	82,401

Spanish Rice.

From Spain the exports are recorded according to the most recent returns available in

Calcutta as follows :—

*Exports of Rice from Spain.*

	Cuba. Tons.	To other places. Tons.	TOTAL Tons.
1865	5,567	360	5,927
1866	8,694	281	8,975

But the rice continent of the world is Asia, and in Asia British

BRITISH INDIA.

India is pre-eminent as the territory where rice cultivation most widely prospers. At least three-fourths of the rice that finds its way into the export trade of the world is exported from British India. The following is a comparative statement analysed from the figures issued by the Financial Department of the Government of India showing the total exports from the presidencies and provinces of India to both Foreign ports and to Indian ports from 1861-62 to 1872-73 :—

*Quantities of Rice (not in the husk) exported from British India.*

Years	Bengal. Tons.	Bombay and Sindh. Tons.	Madras. Tons.	British Burmah. Tons.	TOTAL. Tons.
1861-62	410,271	14,453	75,153	273,984	773,861
1862-63	482,057	15,451	62,463	279,246	839,217
1863-64	576,067	33,212	76,561	367,839	1,052,679
1864-65	695,341	39,234	73,949	386,516	1,195,040
1865-66	836,212	29,055	72,144	394,154	831,565
1866-67 (eleven months)	222,660	12,242	75,502	210,430	520,834
1867-68	352,466	20,192	86,673	404,601	863,932
1868-69	386,614	28,545	88,119	445,252	948,530
1869-70	373,044	27,921	73,902	336,088	810,966
1870-71	430,358	44,347	102,434	423,548	1,000,687
1871-72	341,864	44,043	119,354	482,826	1,077,387
1872-73	511,261	38,119	105,067	688,898	1,344,345

Up to 1866-67 there was an export duty on rice exported to foreign parts of two annas a maund (82½lbs.) and since that year the duty has been raised to three annas. In 1863-64, 1864-65, 1865-66, there was an exceptional demand on India in consequence of the

failure of the crops in Siam and China, and of the prohibition of exports from Siam in 1865. In 1865-66 and 1866-67 there was a general diminution in exports, partly because of the Orissa famine of 1865, and partly because the Siamese markets were again thrown open and rice ceased to find its way from India to China. But lately the increase in exports has been progressive from all parts of India, especially from Burmah, and in 1872-73 the largest quantities ever known were exported, amounting to more than one million three hundred thousand tons. The declared value in pounds sterling of the rice and paddy exported from British India amounted last year to £5,761,028; of this amount the Burmah produce was valued at 2,854,254, the Bengal at 1,959,342, the Madras at 749,518, and the Bombay at 197,914 pounds sterling. The average declared value per ton of rice exported was £8-7-0 for Bombay, £7-13-0 for Madras, £5-12-0 for Bengal, and £4-4-0 for Burmah. In all cases these values were lower than the averages of earlier years which amount to about £9-10-0 for Bombay, £8-0-0 for Madras, £7-0-0 for Bengal, and £4-15-0 for Burmah. The total amount of duty collected on the exports of rice and paddy in the year 1872-73 was £617,497.

The annexed table which has been very carefully prepared from the Financial Department statements shows the detailed exports of rice (excluding paddy) from Bengal to all ports from 1861-62 to 1872-73 inclusive:—

*Statement showing the Exports of Rice from*

	To FOREIGN.									
	United Kingdom.	France.	Germany.	North and South America.	West Indies.	Mauritius.	Bourbon.	Other countries in Africa.	Arabian and Persian Gulfs.	Ceylon, Laccadives, Nicobar, &c.
1861-62 ...	82,209	15,550	6,956	18,626	6,809	57,421	40,814	5,413	24,052	52,658
1862-63 ...	46,456	4,854	4,919	10,689	5,233	69,195	31,583	4,304	16,765	75,239
1863-64 ...	36,501	2,735	1,377	8,248	4,491	65,115	37,849	236	32,960	67,554
1864-65 ...	9,916	1,049	464	7,456	7,444	54,752	32,109	2,736	38,300	77,820
1865-66 ...	21,431	873	...	1,205	9,552	66,426	22,754	2,115	32,237	49,358
1866-67 ...	12,659	431	...	...	11,568	37,136	16,464	3,126	23,794	47,723
1867-68 ...	87,630	2,166	2,416	71	18,523	48,508	12,253	2,337	26,884	58,937
1868-69 ...	42,140	1,435	...	1,816	12,069	64,407	15,323	3,085	33,651	73,095
1869-70 ...	20,310	2,619	..	3,293	14,196	42,907	9,757	1,377	26,087	66,760
1870-71 ...	45,134	1,696	451	...	18,414	63,131	26,596	2,916	33,336	44,936
1871-72 ...	53,459	1,195	422	1,338	20,726	55,240	12,219	2,009	46,513	35,987
1872-73 ...	55,414	90	...	5,292	28,888	121,146	7,209	5,560	35,502	70,752

The figures for 1866-67 in this State-

*Bengal, from 1861-62 to 1872-73 inclusive, in Tons.*

PORTS.					TO INDIAN PORTS.						GRAND TOTAL
Straits Settlement.	China.	Other countries in Asia.	Australasia.	TOTAL.	Bombay.	Sindh.	Madras.	British Burmah.	Indian Ports not British.	TOTAL.	
3,115	18,915	3	9,148	341,198	26,323	810	39,789	296	1,864	69,082	410,271
8,355	114,869	3,146	11,646	407,793	24,228	...	48,205	220	1,551	74,264	482,057
9,948	108,176	3	13,621	388,814	139,070	852	35,266	9,513	2,552	187,253	576,067
14,578	146,766	...	9,972	403,432	225,441	5,270	59,287	1,184	727	291,909	695,341
6,432	33,529	...	9,755	255,167	52,015	486	28,032	112	400	81,045	336,211
1,336	24	...	6,056	160,357	49,137	...	12,489	371	11	62,302	222,659
2,198	598	...	6,268	268,892	61,252	...	22,077	16	199	83,574	352,466
2,046	48	125	4,974	251,244	105,585	...	25,881	117	176	132,369	386,613
886	818	18	1,035	190,093	111,796	...	41,124	42	...	182,962	373,055
2,159	3,189	1	3,267	244,916	146,119	...	38,522	802	...	185,442	430,358
2,715	14,430	35	6,494	252,812	144,287	...	31,734	31	...	179,052	431,864
2,119	10,073	8,668	4,350	355,051	106,738	1,175	47,970	323	...	156,206	511,260

ment are for 11 months only.



Of this trade nearly the whole is from Calcutta. The entire exports to the United Kingdom, to Foreign Europe, to America, to China, to Java and the Straits, and to Australia proceed from Calcutta. Almost the entire exports to Indian Ports are from Calcutta. The total exports from Calcutta in 1872-73 amounted to 401,799 tons. In 1864-65, the year preceding the Orissa famine, they amounted to 600,000 tons, and upon an average they amount to rather more than 350,000 tons, or about ten millions of maunds annually.\*

It will be seen that the proportion of rice that leaves Bengal for Indian ports is enormous. It amounts annually to between 150,000 and 200,000 tons. In 1864-65, it amounted to 290,000 tons, but immediately after the Orissa famine it fell off in an equally extreme proportion. At least three quarters of this amount goes to Bombay, and some 30,000 or 40,000 tons goes to Madras. The Bengal exports in this respect form a very remarkable contrast to those of British Burmah, which province, as we shall see, does not export altogether more than eight or ten thousand tons to Indian ports during the year.

The English and European exports on the contrary are very small, not exceeding 50,000 tons in the year, as against 400,000 or 500,000 tons from Burmah.

\* There is a little work published at Calcutta every year, formerly as a private speculation, but now by the Collector of Customs, entitled, *The Commercial Annual* or a "Tabular Statement of the External Commerce of Bengal" during each particular year.

It is necessary, however, to explain, for the convenience of those who may refer, or are in the habit of referring, to that work, that, although it purports to give the commerce of Bengal, it confines itself to the trade from Calcutta, and that the year of which it treats, 1871-72 or 1872-73, as the case may be, is not the ordinary official year of India from the 1st of April to the 31st March, but the mercantile year from the 1st May to the 30th April. The present writer, in ignorance of these facts which it is impossible to elicit from the book itself, has passed many ineffectual hours in trying to reconcile the figures of the "Commer-

cial Annual" with those submitted by the Custom House to the Government of India and published in the *Trade and Navigation Statements*, and does not scruple, as the result of his experience, to advise those who really wish to understand the statistics of Bengal trade, to turn only to the annual volumes of *Trade and Navigation*. Even after making every adjustment possible,—after allowing for the discrepant months, and the exports from Chittagong and Orissa,—the figures of the rice trade for 1872-73 as given in the *Collector's Commercial Annual* remain about 20,000 tons below what they actually were for that year. In the details of export some of the inconsistencies are of a most serious nature, and in the writer's opinion, at least as far as the rice trade is concerned, the "Annual" although "a handy little volume," is for statistical purposes quite useless.

The export to China is very indifferent in ordinary years, though it was stimulated in an extraordinary manner during the years 1862 to 1865 when there was generally a scarcity in the rice-producing countries of the East and especially in China.\* There are few facts in the history of the rice trade more worthy of observation, than, that when there was famine in China, exactly ten years ago, the ordinary course of trade threw half-a-million tons of rice into the country from localities beyond sea which do not usually export to China, in order to relieve the distress. Even the large imports with which Government is now supplying Bengal are small compared with those spontaneously poured into China during a similar crisis. It may be added that the difficulty of distribution is not apparently complained of in China, in great portions of which country there are no carts, and where the merchants have no railways, but send the rice in the canals and on men's heads. The exports to China will be again alluded to in treating of the trade from British-Burmah. The port of Calcutta exports very little to the Straits Settlements which are naturally supplied from more neighbouring countries. It exports largely to the Persian and Arabian Gulfs, some 30 or 40,000 tons. Calcutta and Chittagong, combined, supply the Mauritius, Bourbon, and the West Indies with all their rice. Bengal also, upon an average, supplies about half the rice imported into Ceylon and the neighbouring islands. The following statement shows whence these importing places have derived their supplies of rice during the year 1872-73:—

*Statement of Exports of Rice into Ceylon, Mauritius, Bourbon, West Indies and the Gulfs during 1872-73.*

	Ceylon, &c.	Mauritius.	Bourbon.	West Indies.	Gulfs.
	Tons.	Tons.	Tons.	Tons.	Tons.
From Calcutta	28,179	103,120	5,593	21,928	35,502
„ Chittagong	41,402	17,726	1,616	3,960	.....
„ Orissa	871	.....	.....	.....	.....
„ Madras	81,120	605	202	129	2,385
„ Bombay	22	.....	.....	.....	16,409
„ Sindh	.....	.....	.....	.....	1,520
„ Burmah	558	.....	.....	571	2,315
Total	152,452	121,851	7,411	29,588	58,131

\* The scarcity of 1863-64 in China had also been aggravated by the disturbances throughout the central provinces on the sea board, occasioned by the Taeping struggle of previous years.

Bengal rice finds its way wherever Bengal coolies emigrate, and no other rice seems able to compete with it in the market. If the exports of Bengal had been stopped this year we may see from this statement to what a tremendous extent the trade would temporarily, at all events, have been diverted. It is easy to say that the emigrant colonies might have imported from Burmah, but the solution of the importation problem is not so simple when we know that in ordinary years, Burmah does not export one single ton of rice to the Mauritius.

The rice exported from Calcutta is divided broadly into three qualities : Table rice, Ballam, and Moonghy ; of these Table rice is of course the best quality. All parts of Bengal, and Behar also, supply their quota though it is believed that the district of Dinagore, now one of the distressed tracts, ordinarily supplies the largest proportion. Ballam is mostly Backergunge and Eastern Bengal rice ; the name may be supposed to be derived from the Chittagong boats of peculiar construction in which the rice is carried, called ballam boats. The Moonghy is common or inferior rice. To the United Kingdom the exports in the largest proportion are of Table rice ; and similarly to Bombay and Australia, where the rice is intended in the first instance as food for Europeans, the rice exported from Calcutta is Table rice. To the Mauritius, however, the exports are Ballam and Moonghy, being in the proportion of 150 tons of Ballam and 75 of Moonghy to 15 tons of Table rice, and the same to Bombay and the West Indies. To the Straits, to Java, to the Maldives and Laccadives, to Ceylon, to Madras and the Coromandel Coast and to the Gulfs the export is almost entirely in Ballam rice.

The principal minor Bengal ports are, Chittagong, and sundry small ports, such as False Point, Balasore, Chandballee, &c., along the coast of Orissa. There is also a small port in the Soonderbuns of Jessore, called Morrelgunge, the exports of which are included in the customs returns of the port of Calcutta. Morrelgunge was established as a port, in 1870, and is only open from the 1st October of each year to the 20th April, in the succeeding one : 4,682 tons of rice were exported during the season of 1872-73, from Morrelgunge, for the Mauritius and Ceylon. In the annexed table are shown the detailed exports of rice, by sea, from Chittagong and Orissa, during the past year :—

Qualities of Bengal rice  
and their destination.

Exports from minor  
Bengal ports.

*Statement showing Export of Rice from Chittagong and Orissa to Foreign Ports during 1872-73*

FROM CHITTAGONG.			FROM ORISSA		
	1872-73.			1872-73.	
	Tons.			Tons.	
I.—To EUROPE.—	...	...	I.—To EUROPE.	...	...
II.—To AMERICA.—	...	...	II.—To AMERICA.	...	...
West Indies	...	3,960			
III.—To AFRICA.—	...	...	III.—To AFRICA.	...	...
Mauritius	...	17,726			
Bourbon	...	1,616			
		19,312			
IV.—To ASIA.—	...	...	IV.—To ASIA.	...	...
Aden	...	213	Ceylon	...	554
Ceylon	...	40,079	Maldiva and	...	...
Maldives	...	1,323	Laccadives	...	317
		41,615			
<b>Total to Foreign Ports</b>	...	<b>64,917</b>	<b>Total to Foreign Ports</b>	...	<b>871</b>

*Statement showing Export of Rice from Chittagong and Orissa to Indian Ports during 1872-73.*

FROM CHITTAGONG	1872-73.	FROM ORISSA.	1872-73.
	Tons.		Tons.
<b>Total to Indian Ports*</b>	<b>28,774</b>	<b>Total to Indian Ports*</b>	<b>15,178</b>
<b>Grand Total of Exports from Chittagong</b>	<b>93,691</b>	<b>Grand Total of Exports from Orissa</b>	<b>16,409</b>

No rice goes from Chittagong to Europe, and it has been pointed out that that port cannot compete with Calcutta as regards freight, nor with Burmah as regards cost of rice. The trade of Chittagong is, however, rapidly increasing, and almost double as much rice was exported thence in 1872-73 as in the previous year. From Orissa the entire export to the Maldives and Laccadives in 1872-73 was from Balasore, to Ceylon from Cuttack (320 tons), and Pooree (234 tons). The coasting trade between Orissa and Calcutta and the Madras ports has already been described by the writer and does not fall within the scope of this article.

The writer has prepared one other statement which will conclude these remarks on the rice export trade of Bengal. That statement will show month by month the exports to *foreign countries*, the figures of the *total* exports unfortunately not being available. It will be noticed that the largest exports are always in December, January and February, the months that immediately

\* Total to Indian Ports: i. e., to Presidency. Indian Ports not within the Bengal

succeed the harvest; and that the smallest exports are during the hot season when the prospects of the harvest are of course uncertain:—

*Statement showing the quantity of Rice Exported from the Presidency of Bengal to FOREIGN COUNTRIES, in each month of the years 1869-70-71-72 and 1873—Figures supplied by the Financial Department.*

			1869.	1870.	1871.	1872.	1873.
			Tons.	Tons.	Tons.	Tons.	Tons.
January	...	...	34,541	42,026	42,568	44,056	51,040
February	...	...	18,179	29,173	25,822	38,127	40,390
March	...	...	18,203	19,637	49,252	23,005	23,495
April	...	...	16,625	13,286	13,760	28,706	15,014
May	...	...	9,845	15,284	11,398	27,974	15,652
June	...	...	10,409	13,642	14,670	18,239	10,847
July	...	...	7,816	17,450	14,801	13,964	15,273
August	...	...	8,960	19,159	15,251	27,932	14,349
September	...	...	9,278	16,958	16,363	33,317	17,521
October	...	...	6,751	13,166	11,486	22,682	12,412
November	...	...	10,550	19,828	16,050	29,719	13,042
December	...	...	19,010	26,152	25,617	37,396	34,345
Total	...	...	170,170	245,761	267,041	345,317	263,380

The total exports from Madras to Foreign ports in 1872-73 were 91,885 tons, and from Bombay 17,857 tons; to Indian ports from Madras 13,186 tons, of Bombay 1,283 tons.

#### EXPORTS FROM MADRAS.

Almost the entire export from Madras—81,120 tons—goes to Ceylon and the Laccadives, Maldives, Andamans and Nicobars, but nearly entirely to Ceylon; and 6,840 tons to Indian ports, not British, in the presidency of Madras. About 7,500 tons leave Madras annually for the United Kingdom. Twenty years ago the average exports from Madras amounted to 124,000 tons; they then fell off very largely, averaging for the ten years from 1860 to 1870 about 75,000 tons, but during the last three

years they have recovered themselves to some extent and now exceed 100,000 tons. The Board of Revenue at Madras have expressed their opinion, which is contrary to that of the Revenue authorities of other local Governments, that the export duty on rice cannot be maintained without seriously affecting the agriculture of the province. From Bombay, as

**FROM BOMBAY.** might be expected, the larger proportion of the exports—16,408 tons—go to the Persian and Arabian Gulfs, but this is nearly entirely a re-export of Bengal rice. The Sindh

**FROM SINDH.** exports, 18,978 tons, go almost wholly—14,961 tons—to the presidency port at Bombay ; 2,385 tons went last year from Sindh to the Gulfs.

The annexed statement shows, in exactly the same form as has already been shown for Bengal, the exports of rice (excluding paddy) from British Burmah from 1861-62 to 1872-73 :

*Statement showing the Exports of Rice from British*

	TO FOREIGN										
	United Kingdom.	France.	Germany.	Mediterranean Ports.	Other countries in Europe	North and South America.	West Indies.	Mauritius.	Bourbon	Other countries in Africa.	Arabian and Persian Gulfs. Ceylon, Laccadives, Nicobars, &c.
1861-62	223,296	7,985	1,468	...	3,122	...	...	9	...	12	121
1862-63	195,137	1,634	2,731	...	7,233	939	...	155	1	...	1,514
1863-64	213,277	6,645	1,742	...	3,442	...	...	261	...	...	789
1864-65	119,630	2,269	..	...	1,838	4,555	341	92	...	345	1,041
1865-66	231,736	521	1,529	...	3,400	850	1,006	251	...	278	462
1866-67	112,937	110	335	...	1,952	1,150	...	4,415	...	...	1,000
1867-68	221,612	5,010	3,613	..	1,702	1,118	...	471	..	...	5,484
1868-69	361,566	8,103	8,661	..	1,568	1,292	...	..	...	...	3,563
1869-70	241,041	1,469	5,550	...	21	1,683	...	1,622	..	...	3,506
1870-71	313,803	5,130	10,530	4,678	1,953	...	...	...	...	...	1,285
1871-72	312,111	3,262	10,632	1,492	6,546	...	...	221	...	...	1,782
1872-73	532,717	..	5,592	19,125	9,750	1,151	572	...	...	4,2315	554

The figures for 1866-67 in this statement are for 11 months only; and those for 1867-68, 1868-69, these years, in

Burmah from 1861-62 to 1872-73 inclusive, in tons.

PORTS.						TO INDIAN PORTS.					
Straits Settlements.	China.	Japan.	Other Countries in Asia.	Australasia.	Total.	Bengal.	Bombay.	Madras.	Indian Ports, not British.	Total.	GRAND TOTAL.
29,843	4,106	...	748	...	270,722	23	37	3,202	...	2,262	273,981
60,011	3,415	...	3,616	306	276,767	51	21	2,407	...	2,479	279,246
104,070	16,721	...	2,834	219	349,999	24	10,292	7,624	..	17,840	867,839
126,315	76,716	...	2,910	300	369,352	111	11,185	5,617	248	17,161	886,516
83,053	53,571	...	3,117	...	379,785	68	5,497	6,304	...	14,369	394,154
18,293	2,335	...	3,593	...	179,426	73,603	9,411	7,966	...	31,010	210,439
15,157	...	...	707	...	251,896	57,895	20,108	71,711	...	149,714	404,000
12,558	...	...	916	...	401,227	874	6,225	33,926	...	41,025	445,252
12,384	...	...	243	...	271,013	3,887	27,575	33,613	...	65,075	330,088
26,794	2,293	1,725	2,633	...	412,155	496	7,471	3,426	...	11,393	423,648
27,361	2,098	...	4,042	...	461,563	210	7,327	13,006	...	20,543	482,126
25,427	12,345	...	11,294	91	680,984	106	4,220	4,808	...	8,934	689,898

1869-70 are for Grain and Pulse of all kinds, rice not being shown separately, under each country, for the Local Returns.



For convenience of comparison the following statement has also been prepared and may be inserted in this connexion showing in a comparative form the detailed exports from Bengal and Burmah during the past two years. Bengal and Burmah are the two greatest rice producing countries of the world, and we can gain no better idea of the relative importance of their trade than by contrasting them at a glance:—

*Statement showing Export of Rice from BENGAL TO FOREIGN PORTS during 1871-72 and 1872-73.*

			1871-72.	1872-73.
			Tons.	Tons.
I.—To EUROPE—				
United Kingdom	...	...	53,459	55,413
France	...	...	1,199	89
Germany	...	...	421	.....
Mediterranean Ports	...	...	.....	3
Total to Europe			55,079	55,505
II.—To AMERICA—				
North and South America	...	...	1,338	5,291
West Indies	...	...	20,726	28,887
Total to America			22,064	34,178
III.—To AFRICA—				
Mauritius	...	...	55,240	121,146
Bourbon	...	...	12,219	7,209
Other countries in Africa	...	...	2,009	5,560
Total to Africa			69,468	133,915
IV.—To ASIA—				
Arabian and Persian Gulfs	...	...	46,512	35,502
Ceylon, Laccadives and Maldives, Andaman and Nicobars, chiefly Ceylon	...	...	35,987	70,751
Straits Settlements	...	...	2,745	2,109
China	...	...	14,430	10,073
Other countries in Asia	...	...	34	8,668
Total to Asia			99,708	127,103
V.—To AUSTRALASIA			6,464	4,350
Total to Foreign Ports			252,783	355,051

*Statement showing Exports of Rice from BENGAL TO INDIAN PORTS during 1871-72, and 1872-73.*

			1871-72	1872-73
			Tons.	Tons.
I.—BOMBAY			144,286	106,738
Sindh	...	...	.....	1,174
II.—MADRAS			34,733	47,970
III.—BRITISH BURMAH			31	323
Total to Indian Ports			179,050	156,205
Grand Total of Exports from Bengal			431,833	511,256

*Statement showing Export of Rice from BRITISH BURMAH TO FOREIGN PORTS during 1871-72 and 1872-73.*

			1871-72 Tons.	1872-73. Tons.
<b>I.—To EUROPE</b>				
United Kingdom...	...	...	342,144	532,717
France ...	...	...	3,262	.....
Germany ...	...	...	10,632	5,592
Mediterranean Ports	...	...	1,492	19,125
Other countries in Europe	...	...	6,546	9,750
		<b>Total to Europe</b>	<b>364,076</b>	<b>567,184</b>
<b>II.—To AMERICA—</b>				
North and South America	...	...	.....	1,154
West Indies	...	...	.....	672
		<b>Total to America</b>	<b>.....</b>	<b>1,726</b>
<b>III.—To AFRICA—</b>				
Mauritius	...	...	224	.....
Bourbon	...	...	.....	.....
Other countries in Africa	...	...	.....	4
		<b>Total to Africa</b>	<b>224</b>	<b>4</b>
<b>IV.—To ASIA—</b>				
Arabian and Persian Gulfs	...	...	.....	2,315
Ceylon, Laccadives and Maldives, Andamans and Nicobars	...	...	1,782	558
Straits Settlements	...	...	87,361	85,447
China	...	...	4,098	12,345
Other countries in Asia	...	...	4,042	11,294
		<b>Total to Asia</b>	<b>97,283</b>	<b>111,959</b>
<b>V.—To AUSTRALASIA—</b>				
	...	...	.....	91
		<b>Total to Foreign Ports</b>	<b>461,583</b>	<b>680,964</b>

*Statement showing Export of Rice from BRITISH BURMAH TO INDIAN PORTS during 1871-72 and 1872-73.*

			1871-72. Tons.	1872-73. Tons.
I.—BENGAL	...	...	210	106
II.—BOMBAY	...	...	7,327	4,220
III.—MADRAS	...	...	13,006	4,608
		<b>Total to Indian Ports</b>	<b>20,543</b>	<b>8,934</b>
		<b>Grand Total of Exports from Burmah</b>	<b>482,126</b>	<b>689,898</b>

The Burmah trade in rice has gradually outstripped the trade from Bengal and now far surpasses it. In spite of the enhancement of duty from two annas to three annas a maund in 1867, the exports have increased to an extent unprecedented and extraordinary. And while the whole exports from Burmah have increased from 210,430 tons in 1866-67, to 689,898 tons in 1872-73, it is observable that this increase is almost entirely in duty paying cargoes, or cargoes to foreign ports, which have increased from 179,420 tons to 680,964. The value of the rice exported from Burmah is now close upon three millions sterling.

A prodigious export is now annually made to the United Kingdom, amounting on the average to about 300,000 tons, and steadily increasing. During the last year it exceeded half-a-million tons. Exports to the United Kingdom enormous. This export of rice to Europe is the most remarkable feature of Burmah trade. We have seen that the exports from Bengal are only one-tenth as compared with Burmah.

The rice of Siam and Bangkok does not compete with that of Burmah, and with the present scarcity of ships at low rates of freight it seems impossible that it should do so. There is every reason, remarks the Chief Commissioner of British Burmah, to anticipate the maintenance of the Burmah exports; the amount of land under rice cultivation is increasing, and vast tracts have lately been reclaimed from waste by the Government embankments of the Irrawaddy; the population is increasing rapidly, and the demand for rice for export is of progressive growth. The consumption of rice appears to be extending on the Continent and in America, and as long as Burmah can manage to supply rice at a profit at rates not much above those now existing, there seems little ground for apprehending any falling off in the demand. Mr. Eden adds that if only ships are forthcoming, 1873-74 will show as large an export of rice as 1872-73. The scarcity of sailing ships of moderate size is one of the great difficulties which the trade has at present to contend with.

Canal steamers are largely resorted to for carrying, and no fewer than 80,000 tons of rice were sent home by the canal route in 1872. The Suez Canal Transport fell off, however, in a very marked degree during 1873, the higher freight required as compared with sailing vessels being, in very few instances, compensated for by an equivalent in price obtained, and speculators generally gave the preference to cargoes shipped *via* the Cape. The total quantity exported by Canal steamers from the Burmah rice ports into Europe last year amounted to 48,618 tons only. It is especially noteworthy that several of the steamer cargoes were directed to Genoa and Venice, Burmah rice having been found to compete successfully with Italian

rice at the comparatively low price at which the former can be imported. No less than ninety Italian ships entered the port of Rangoon between the 1st January and the 1st October 1873.

The bulk of the rice exported from British Burmah is, however, as has been pointed out, not really destined for the United Kingdom, but finds its way from Burmah to the Continent in vessels which clear nominally for the United Kingdom, but call at Channel Ports, Cork, Falmouth, &c., "for orders," on receipt of which they proceed to their foreign destinations, Antwerp, Bremen, Hamburg, or elsewhere. If foreign prices are higher or more remunerative than those ruling in the United Kingdom, the rice is despatched accordingly to one or other of the Continental or American ports. In the meantime the vessel is entered among the shipping arrivals with its destination as "Awaits." It is estimated that at least 60 or 70 per cent of the rice exported from British Burmah to the United Kingdom in reality finds its way to the Continent and America.

Of the three administrative divisions of British Burmah,—Arracan, Pegu, and Tenasserim,—the exports of rice are naturally largest from Pegu, which contains Rangoon the capital and principal port of Burmah as well as the lesser ports of Bassein and Thayetmyo. Four hundred and fifteen thousand tons alone were exported in 1872-73 from Rangoon; of this large export the quantity shipped for the United Kingdom was 320,247 tons, for the Straits Settlements 55,404; for other foreign ports 31,467 tons; for India 7,349 tons; and for provincial ports 561 tons. The shipments to Europe nearly doubled those in the preceding year. The total exports from Bassein amounted to 74,927 tons, of which 72,769 tons found their way to Europe. No rice was exported from Thayetmyo.

The Arracan division comes next with the important port of Akyab whence all the grain exported from the Arracan division is shipped. In 1872-73 the exports were 173,252 tons, of which 136,998 tons were cleared for the United Kingdom and 24,871 for Foreign Europe. "Necransie" is the grain generally grown throughout this division, and there is a good deal of an inferior grain called Laroong also cultivated. The local quotations for good Necransie are only a little over 4s. per cwt., and attempts have been made with considerable success, says Mr. Eden, to induce the people of Akyab to plant a better kind of rice, the Ngatsain of Pegu, which fetches at least a shilling a cwt. better price in the market.

The bulk of the Tenasserim rice exports are from Moulmein. The shipments from this division are chiefly made to the Straits and Chinese ports

a fact which will be alluded to again in connexion with the Siam and Cochin China Trade. Moulmein in 1872-73 exported only 19,518 tons to Europe, 2,087 tons to India and the Provincial ports, but it despatched 35,438 tons to China and the Straits. The Moulmein rice, moreover, bore last year a more favourable position, in the home markets than it had hitherto borne. There is a small local trade carried on by Mergui and Tavoy, the minor ports of Tenasserim. From Tavoy the exports amounted to 4,500 tons, and, a brisk trade was carried on with Penang and the Siamese port of Tonka.

It will have been observed from the tabular Statement, as well as gathered from the above remarks, that Exports to the Mauritius, &c., very small. while the rice trade between British Burmah and Europe is enormous, the traffic, on the other hand, between Burmah and the West-Indies, the Mauritius and Bourbon, the Gulfs, Ceylon and the neighbouring islands—where the Bengal exports all go—is of the most insignificant dimensions. To the Gulfs there are no exports and were none even during the famine in Persia in 1870-71. To the West Indies there are ordinarily no exports. To the Mauritius there were no exports in 1872-73, when the total exportation from the province amounted to nearly 700,000 tons. The average exports from Burmah into Ceylon scarcely exceed a thousand tons annually.

The explanation we have to suggest of this infinitesimal export into the rice-eating countries of the world is a simple one. The Burmese rice is consumed in enormous quantities, but it is not, it is apprehended, largely in demand as an article of food. Burmese rice sells in the home markets at from 8 shillings to 11 shillings per cwt. The highest prices reached do not exceed 12 shillings. Good Bengal rice, however, commands 14 to 18 shillings in the market, and good Carolina, which is the finest quality of rice, has sold at 35 to 40 shillings per cwt. The quality of good Burmese rice is beyond question much inferior to the quality of good Bengal rice, and in comparison is usually considered unpalatable and rejected as food by rice-eating communities. The enormous European imports from Burmah, which now exceed half-a-million tons, are, it is believed, consumed for the most part in the manufacture of starch and spirits, and in the numerous other manufactures in the composition of which rice forms an ingredient.

Burmese rice is in fact comparatively a soft-grained rice of bad colour and deteriorates in quality during a long sea journey. Even the best quality of rice exported to Europe from Burmah is soft-grained when compared with Bengal rice and is less in demand

for the table in England. The ordinary qualities will not apparently stand shipment to the Gulfs, or to the Mauritius, or the West Indies. Ceylon can procure Burmah rice for its own consumption as easily as it can Bengal rice, but it invariably imports Bengal rice in preference. From their geographical vicinity on the other hand the Straits Settlements are naturally dependent on Burmah, Java, Siam, or Cochin China, and do not draw on Bengal. From similar considerations China, as will presently be shown, draws on the more Eastern ports. But excluding China and the Straits it may be safely said that, as a general rule, the rice-eating communities of the world are dependent on the rice exports from Bengal for their sustenance, and that the enormous surplus of British Burmah is usually converted to other uses than food.

The exports from Burmah to the Straits Settlements and China present some very remarkable and instructive variations. From 1862 to 1866 large supplies were shipped to these places varying from 60,000 to 200,000 tons. A great scarcity prevailed in the Eastern provinces of China in 1863, 1864 and 1865, and the crops in Siam were so short in these years that the Government prohibited the export of grain, and in consequence there was a very large and abnormal demand for rice from Burmah. Attention has already been drawn to the way in which the exports from Bengal to China were stimulated by the same cause. During the three years 1862-63, 1863-64 and 1864-65 no less than 369,801 tons of rice from Bengal, and 96,852 tons from Burmah were thrown into China by private enterprise to assist in supplying with food the distressed millions of the Eastern portions of that Empire. In 1865-66 Burmah continued to supply 53,574 tons. About 40,000 tons of rice for China were added from Bombay in these years. To meet the scarcity which then prevailed in China more than half-a-million tons of rice were spontaneously exported by the natural action of trade into China from British Indian ports. At the same time, to supply the deficiencies of importation into Singapore and the Straits Settlements, which ordinarily draw their supplies from Siam, Cochin China, and Java, but which at this crisis from the short crops in those tracts were unsupplied, Burmah exported thither in these four years no less than 373,449 tons.

From 1866 to 1870 the exports to the Straits fell off to what there is reason to believe is their normal quantity. The exports oscillated from between 12 to 18,000 tons, to the Straits Settlements and to China they were absolutely *nil* during three years, and in other years they did not exceed two or three thousand tons—a very small import to that vast country, and an import which is as nothing compared to the hundreds of thousands of tons which are annually imported into China from the Eastern Archipelago

Again, however, in 1871 and 1872, when there was another scarcity in the Eastern markets, the exports from Burmah to the Straits rose to above 80,000 tons; and in 1872-73 Burmah exported 12,345 tons to China. To other countries in Asia also it exported in that year 11,294 tons: the detail of the "other countries" is not specified in the returns, but it includes Java, and it is known that in 1872 there was famine in that island, and it is pointed out more than once in this paper that very large exports of rice were consigned from other exporting countries to Java, during the past season.

No doubt it remains to be seen, and it is a matter of much interest, whether in consequence of the coasting steamers that are now available at Rangoon the recent increased exports to the Straits are not more than temporary, and whether the Burmah trade to the Settlements will not be able to supersede the trade from the old exporting countries of Java and the East. It must not be forgotten, however, that these countries have of late years been unfortunate in their crops, while the harvests in Burmah have been unusually large, and, under all the circumstances, the writer ventures to prophesy that the course of traffic will not vary much from what it lately has relapsed into during ordinary seasons of produce.

The supply of rice from Burmah to ports within British India is not large as a rule. The year 1867-68, 1868-69, 1869-70 may be noticed as exceptional. In the first of those years the exports amounted to 149,000 tons, of which 57,895 tons were to Bengal, and 71,711 to Madras, thrown into those Presidencies in consequence of the demand for rice which arose after the famines in Orissa and Ganjam. In 1866-67 the exports were 31,000 tons, which very much exceeds the average, and in the two years succeeding 1867-68 they amounted to 44,000 and 65,000 tons respectively. The rice harvest all over the East was very good in those years and exporters were driven into ports which they would not ordinarily have frequented. The normal export of rice from Burmah into British Indian ports does not exceed ten or fifteen thousand tons in the year.

"There is," writes Mr. Eden, as he fittingly concludes his observations on the rice trade of the province, "probably no better indication of the opinions of those most competent to form an opinion on the stability and prospects of the rice trade, than the extent to which mercantile houses are prepared to risk their capital in erecting expensive mills with all the best steam machinery for cleaning rice." In 1867 there were three such mills in Burmah; in 1869 there were thirteen, and in 1872 twenty-six mills. In 1873 two additional

mills were set to work at Akyab, and the construction of another had commenced ; a second mill was started in Basseln and it was contemplated to erect a third ; whilst six new mills were being put up in Rangoon. " When it is remembered," says the official report, " that a first class mill will cost something like £30,000, an idea of the amount of capital which is now being sunk in the trade can be formed."

The writer has found difficulty in procuring information regarding the rice trade of the Indian Archipelago. The exports of rice from Saigon, as shown in the following statement, have been derived from Mr. Eden's Report on the Trade and Commerce of British Burmah for 1871-72, which has already afforded us so much assistance in compiling this article :—

*Statement of Exports of Rice from Saigon.*

Year.	Europe.	Mauritius and Bour- bon.	Singapore & Straits.	China.	Japan.	Other places.	TOTAL.
	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.
1868 ...	37,801	17,139	17,593	62,292	2,625	5,930	133,383
1869 ...	31,260	20,592	17,196	29,163	59,918	526	158,957
1870 ...	8,326	7,587	9,913	76,722	122,193	833	225,574
1871	2,384	2,851	12,816	212,259	21,738	3,594	293,615

A detailed statement of the exports of rice from Saigon has also recently been obtained from the British Consul at that place which the courtesy of the Financial Department enables us to publish for the information of our readers :—



*Statement of Exports of Rice from Saigon during 1873.*

Countries.	Ports.	Quantities.	TOTAL.
		Tons.	Tons.
China	Hong-Kong	142,881	159,078
	Amoy	9,316	
	Swatou	6,107	
	Macao	774	
Singapore	.....	.....	34,280
Java	Batavia	9,937	56,073
	Sourabaya	28,443	
	Samarang	17,693	
Mauritius	.....	.....	4,042
Philippines	Manilla	3,486	8,182
	Cebu	4,696	
Calcutta	.....	.....	3,614
Europe	.....	.....	5,023
America	Valparaiso	262	4,249
	Havana	1,331	
	Monte Video	1,232	
	Rio de Janeiro	1,424	
Australia	.....	.....	1,289
	.....	.....	.....
Total	.....	.....	275,860

The annexed statement of exports from Siam, which it will be convenient to consider with that of the  
**EXPORTS OF RICE FROM SIAM.** exports from Saigon, is also extracted from Mr. Eden's Report.

*Exports of Rice from Siam.*

Year.	Europe and Australia. Tons.	America. Tons.	Singapore, India, and Java. Tons	China. Tons.	TOTAL.
1869	53,039	1,459	48,206	58,327	161,031
1870	8,481	...	31,873	114,615	154,469
1871	1,538	485	9,412	100,362	111,797

The writer has also ascertained that in 1864, the year before the famine, the exports from Siam were 143,437 tons, and that in 1865, the year of the famine, when exports were stopped by Government, they fell to 2,186 tons. It is known that they recovered themselves in 1866 to almost their usual amount, a

result which at once very remarkably affected the trade from British Burmah, but the exact particulars are not available.

It is, perhaps, worth while also to add that the British Consul at Siam has furnished the Government of India with the following statement of exports from Bangkok (the port of Siam) during the month of December 1873. Unfortunately, his report does not give the exports for the whole year, and it is explained that, under exceptional circumstances, the exports which took place in this particular month exceeded the average.

*Statement of Rice exported from Bangkok during December 1873.*

			Tons.
For Hong-Kong	...	...	2,209
„ Singapore	...	...	5,056
„ Java	...	...	1,432
„ Australia	...	...	403
			<hr/> 9,100

The principal exports from the Archipelago are, however, apparently in the spring, and not, as might be assumed from our Bengal experience, in the cold weather.

From these statements it may be inferred generally that the average exports of rice from Saigon or Cochin-China amount to about 250,000 tons annually, and that those from Siam or Bangkok amount to about 150,000 tons. The whole of the normal

Siam and Saigon exports from these ports are into China, Japan, export Eastward not and the China Seas, to Java and to the Straits Westward. Settlements. The rice does not find its way Westward or to European countries.

“It has been said,” writes Mr. Eden,” that British Burmah could never compete, weighted as it is, with Saigon and Bangkok, the rice of which ports is subjected to no duties. The results on the contrary show that these ports are quite unable to compete with us, and that they have been beaten altogether out of the European market \* \* \* \* \* Indeed, the rice of Cochin-China and Siam would never have entered the European market had it not been that there was in 1868 a very large harvest in China, and the home supply of that country was such as to make the foreign rice a drug in the market. Under these circumstances Saigon and Bangkok had no other course but to ship to Europe; this they did and were supposed to have become dangerous competitors to Burmah; though, after all, the quantity they shipped to Europe was very insignificant, Bangkok sending in 1869, 15,000 tons, and Saigon 31,260, a very small export compared with the 550,000 tons which Burmah is sending this season (1872-73). The experimental export from Saigon and Bangkok, however, was a failure: that rice did not suit the European market and fetched (one to two

Mr. Eden's analysis of the trade of Burmah, Saigon and Siam.

shillings per cwt.) less than Burmah rice ; and as a natural consequence as soon as the rice market in China resumed its normal condition, the exports from Saigon and Bangkok to Europe ceased, and the whole trade fell again into the hands of Burmah."

"It must be prominently kept in view," continues the Chief Commissioner, "that the natural ports of supply for China are Saigon and Bangkok ; the natural ports of exports to Europe are the Burmah ports. It is not only that the Saigon and Bangkok rice suits, the Chinese markets best and always commands a higher price there than the Burmah rice, but the situation of these ports is such that Burmah could never compete with them if only they were in a position to supply the whole of the China demand. The difference in freight as against the ports of Burmah is as seven to five. The Chinese junks and small French barques are able to carry the crop in conveniently small cargoes and at low rates. In the previous discussions which have occurred, two great mistakes were committed ; first, in omitting to see that a heavy demand on Burmah for rice for the China markets was due to failure of the crops in China and Formosa, and short crops in Siam, which led to prohibition of export for a time from Bangkok ; and next in omitting to see that the export to Europe from Cochin-China and Siam in 1868 and 1869, was an exceptional state of things resulting from over-supply in China, and the necessity of sending the rice anywhere where it would fetch any price at all, rice being an article which will not bear keeping over from season to season. It may be taken as an undeniable fact that so long as the rice-supply of Siam and Cochin-China is not capable of meeting the wants of China, we shall be called upon to make good the deficiency ; but that, whenever they are capable of meeting with the demand, no rice will go from Burmah to the East.

"On the other hand, so long as Siam and Cochin China can obtain a market in the East, they will not endeavour to compete with Burmah in the European market. At present the balance is in favour of Burmah ; for the last two seasons we have been sending large quantities of rice to China to supplement the export of Saigon and Bangkok, while they have not in any way interfered with us in the European market."

During 1873 only 5,023 tons of Saigon rice were imported into Europe, and that principally to France. Only one cargo was discharged in England and the quality of that proved very indifferent, the grain being much mixed with broken rice and deficient in colour. From Siam no shipments were made to any of the European markets during the past year.

The qualities of rice exported to the East are comparatively soft-grained, and although they will bear export to China, they deteriorate rapidly in transit and will not bear shipment to Europe, or to any

Inferior quality of  
Siam and Saigon rice.

distant ports, a fact which explains the low rates fetched by Bangkok and Saigon rice in Europe.

It has already been remarked that the Burmese rice which goes to China is almost entirely sown in the Division of Tenasserim and is of much the same quality and nature as the Siam rice, commanding a lower price in the European markets than the rice exported from Rangoon.

Cochin China and Siam, besides supplying China and the China seas, Japan and the Philippines, exported

The Island of Java.      during 1873 very largely into the island of Java and into Singapore. Saigon alone sent 56,000 tons into Java and 34,000 tons to Singapore.

Java is, however, ordinarily a very large rice-producing tract, so large as to have long since earned for itself the title of the granary of plenty for all the Eastern Archipelago. Rice used to be the staple product of Java though the extent of its cultivation is now far surpassed by that of the sugarcane and occasionally equalled by that of coffee. The great bulk of the foreign trade is carried on through the ports of Batavia, Samarang, and Soerabaya by the Dutch and Chinese. More than half the trade of the island centres in the important Dutch Settlement of Batavia.

RICE EXPORTS FROM JAVA. The rice exports from Java and Madura (a little island to the north of Java belonging also to the Dutch), according to the following trade returns vary considerably, but it will be seen that they cannot be said to evidence a progressive increase in the traffic:—

*Statement of Exports of Rice from Java and Madura.*

		Tons.			Tons.
1830	...	21,730	1818	...	42,621
1835	...	41,106	1849	...	40,480
1836	...	53,196	1863	...	55,435
1839	...	65,677	1865	...	27,661
1840	...	88,592	1866	...	43,282
1841	...	40,251	1867	...	29,957

The detailed exports of rice from Java during the year 1863, 1865, 1866, 1867, were as follows:—

	Holland.	Palembang, Rhio, and Banka (Suma- tra ports) and Borneo.	China.	Other places (almost en- tirely Singa- pore and the Straits).	TOTAL.
	Tons.	Tons.	Tons.	Tons.	Tons.
1863	16,194	15,178	6,481	17,582	55,435
1865	2,817	5,013	8,653	11,179	27,661
1866	8,004	5,445	5,102	24,731	43,282
1867	21,109	6,638	115	13,095	29,957

The trade in rice from Java is now free of duty, as it is from Siam and Cochin-China, but till within the last ten years a Customs duty was levied of 10 cents per picul.\*

The average exports may be put down at about 40,000 tons, of which the larger portion is distributed among neighbouring ports, and particularly Dutch ports in the Archipelago. The prospects of the island crops are, however, excessively precarious, and nearly every year there are imports of rice into

Imports of rice into Java as well as exports from it. The imports of rice into Java during 1865, 1866,

and 1867 are thus given:—

*Imports of Rice into Java.*

		Bali. Tons.	Sumatra Tons.	Other places. Tons.	TOTAL. Tons.
1865	...	8,163	3,394	2,140	13,697
1866	...	3,163	2,621	868	6,652
1867	...	2,396	127	473	2,996

These imports are small, but coupled with the fact that the exports from the island do not increase but rather diminish, they would seem to show, what has been alleged, that the cultivation of rice in Java is on the decline, and certain it is that the sugar exports from Java have increased from 6,000 tons to 100,000 tons during the last forty years, while the exports of rice have remained stationary. In 1872 when the rice crops in Java partially failed,

and the island was dependent on importation, Cochin-China supplied 56,000 tons to meet the emergency, Siam about 10,000 tons, Burmah about 10,000, and Bengal 8,668 tons. Bengal rice to Java is a very new destination and remarkable, as Java can supply herself more cheaply from neighbouring ports; but the export illustrates favourably the vigour of Calcutta trade, and proves also the fact that Bengal rice always finds its way wherever rice is really wanted for food.

The quality of Java table rice exported to Holland is always excellent and commands high prices at home. In 1873, the shipments from Java to Europe amounted to 3,992 tons against 9,316 tons in 1872, a falling off attributable of course to the famine of the earlier year. The average European exports of Java rice are not less than 10,000 tons in the year.

Leaving the Indian Archipelago and proceeding north we still find rice largely cultivated but not in sufficient quantities for export. On the contrary the enormously populous countries of

\* *Picul*.—A measure of weight 131lbs.; in Malta  $1\frac{1}{2}$  cwt. (140lbs.); in general use in the East: in ordinarily in China 133½lbs. Batavia, it is 135lbs. 10oz.; in Japan

Eastern Asia are obliged, as we have seen, to trust generally to importation. China exports certain quantities, 10 or 12,000 tons a year, to the United States, but these are apparently re-exports and not native produce. From the Philippine Islands alone there appears to be a genuine export of native rice of some 12,000 tons or so annually which finds its way to China. Japan supports itself to a great extent though it imports also, and, particularly from Cochin-China. Until 1873 any exportation from this country was strictly prohibited, but, being now permitted, the rice traders in England expect a considerable addition to their supplies from this quarter. The grain, being somewhat similar to Java rice, will probably prove a formidable rival if it can be imported at a moderate price. The shipments of 1873 (including those *via* Hong-Kong) amounted to nearly 6,000 tons with prices ranging from 13s. to 15s. 3d. The exports from Japan are expected to be more than doubled during the present year, when there is a scarcity of Bengal rice, and several cargoes are reported to have been already sold to the trade at 16s. per cwt.

England is the principal rice consuming and rice importing country of the world. Within the last forty years the imports have increased enormously, more than tenfold. The following statement is collated from the second edition of Mr. McCulloch's Commercial Dictionary published in 1845. The average imports, it will be seen, do not exceed twenty thousand tons:—

*Imports into Great Britain from 1835 to 1841, from Mr. McCulloch's Commercial Dictionary.*

	British India.	Sumatra and Java.	United States.	Other Countries.	TOTAL.
	Tons.	Tons.	Tons.	Tons.	Tons.
1835	11,652	565	114	144	12,476
1836	7,259	1,379	148	564	9,341
1837	17,641	1,512	59	40	19,254
1838	10,194	1,396	25	102	11,918
1839	20,965	7,252	33	600	28,852
1840	16,037	5,678	42	437	22,195
1841	19,876	4,279	7	272	24,335

of which as nearly as possible one-half was each year retained for consumption and the rest re-exported.

The following Statement will illustrate the import trade into Great Britain from the year 1854 to 1871. Columns are also added showing each year the average prices of Carolina rice and other

rice in the London markets. This information is derived from the Calcutta Chamber of Commerce who supplied it officially to the Bengal Government. The average consumption per head in lbs. in each year according to an adjusted rate of population is also shown. The figures are entirely official and have been extracted from the Abstract of the Bengal Chamber which was derived from the Trade Returns and partly from reference to the Trade Returns themselves:—

*Comparative Statement showing the Imports of Rice into the United Kingdom from 1854 to 1871, the average prices of Rice per cwt. and the consumption of Rice per head of the population per lb.*

	From United Average prices States.		From Bengal Average prices per cwt. and Burma.		From other Average prices places.		TOTAL IMPORTS.	Consumption per head.
	Tons.	s. d.	Tons.	s. d.	Tons.	s. d.	Tons.	
1854 ..	1,019	not known	63,269		not known	not known	not known	not known
1855 ..	692	ditto	107,892		ditto	ditto	ditto	ditto
1856 ..	3,043	25 6	177,210		4,357	10 6	184,600	10 40
1857 ..	2,338	24 6	157,971		10,798	11 3	171,607	8 65
1858 ..	2,128	21 6	178,937		3,226	8 10	184,601	9 83
1859 ..	2,580	21 1	62,219		7,705	10 9	72,504	1 16
1860 ..	3,196	23 4	65,740		7,545	13 0	76,751	1 41
1861 ..	not known	21 9	not known		not known	12 8	165,281	2 25
1862 ..	1,911	36 0	190,633		3,405	11 10	193,939	10 15
1863 ..	91	36 1	147,911		5,519	11 11	153,514	5 58
1864 ..	none	32 6	135,350		24,134	11 2	159,484	5 72
1865 ..	2,126	34 0	63,314		29,639	12 4	97,079	2 05
1866 ..	170	32 4	91,780		21,709	13 1	113,659	2 40
1867 ..	475	39 6	116,794		21,952	14 3	139,221	5 85
1868 ..	none	32 3	179,128		57,666	12 2	236,794	9 84
1869 ..	892	29 0	150,479		114,992	10 8	266,363	12 75
1870 ..	232	not known	153,438		50,607	not known	203,877	6 74
1871 ..	none	ditto	181,555		not known	ditto	not known	not known.

The Comparative Statement below shows the detailed Imports and the detailed Re-exports from the United Kingdom for 1870, the last year of which detailed official figures are available to the writer in Calcutta :—

<i>United Kingdom, 1870.</i>				<i>Re-exports of Rice (not in the husk) from the United Kingdom, 1870.</i>			
			Tons.				Tons.
<b>I.—EUROPE—</b>				<b>I.—EUROPE—</b>			
France	...	...	703	Russia	...	...	1,389
Belgium	...	...	651	Sweden	...	...	781
Holland	...	...	1,252	Prussia	...	...	1,249
Total from Europe	...	...	2,606	Hamburg	...	...	1,979
<b>II.—AMERICA—</b>				Bremen	...	...	991
United States	{ North Atlantic Ports	...	46	Holland	...	...	3,678
	{ South do. ...	...	186	Belgium	...	...	6,794
Total from America	...	...	232	France	...	...	29,780
<b>III.—AFRICA—</b>				Portugal, Azores & Madeira	...	...	6,059
British Possessions, South Africa	...	...	1,549	Turkey Proper	...	...	1,333
<b>IV.—ASIA—</b>				Malta	...	...	819
British India :—				Total into Europe	...	...	45,792
Bengal and Burmah	...	...	153,038	<b>II.—AMERICA—</b>			
Bombay and Smdra	...	...	13,821	United States	{ North Atlantic Ports	...	11,003
Madras	...	...	5,125		{ South do. ...	...	225
Siam	...	...	17,259		{ Pacific Ports	...	7
Straits Settlements	...	...	8,839	British North America	...	...	1,960
Other countries	...	...	1,098	British West India Islands	...	...	6,246
Total from Asia	...	...	199,484	Cuba and Porto Rico	...	...	27,869
Grand Total of Imports into the United Kingdom	...	...	203,378	Brazil	...	...	3,372
				Uruguay	...	...	1,141
				Argentine Confederation	...	...	2,254
				Total into America	...	...	54,177
				<b>III.—AFRICA—</b>			
				Egypt	...	...	1,553
				Morocco	...	...	785
				West Coast of Africa (British)	...	...	1,165
				Doitto ditto, (Foreign)	...	...	816
				Total into Africa	...	...	4,319
				<b>IV.—ASIA—</b>			
				Syria and Palestine	...	...	1,109
				Other countries	...	...	5,679
				Grand Total of Re-exports from the United Kingdom	...	...	111,076

This Statement is derived from the Returns of the English Board of Trade, and it will not fail to strike any one who may examine the figures, that there is a considerable discrepancy between the imports from British India as shown herein, and the exports from British India to the United Kingdom as



already shown in this paper from figures supplied by Indian official sources. The imports from Bengal and Burmah during 1870 are shown at 153,038 tons; we have already seen that the combined exports from Bengal and Burmah during 1870—71 to the United Kingdom amounted, according to the Indian returns, to 388,439 tons. This discrepancy, moreover, has existed year by year as the following figures will show :—

	1867-68. Tons.	1868-69. Tons.	1869-70. Tons.	1870-71. Tons.
Total quantities of Rice exported from India to the United Kingdom as per India volume ...	328,405	418,585	250,818	397,021
	1867. Tons.	1868. Tons.	1869. Tons.	1870. Tons.
Total quantities of Rice imported into the United Kingdom from India as per English volume	131,051	206,626	193,124	172,288

These results have attracted the attention both of the Home and Indian Governments, and in India a satisfactory reply has been given to those who would impugn the accuracy of the local figures. Indeed the substantial accuracy of the Indian figures which, during recent years, have been compiled with great care, is undoubted. Some excess under any circumstances would be expected in view of the numerous casualties, shipwrecks, &c., to which such a trade as the Indian export trade in rice must be subjected. But the real explanation of the difference is to be found in the circumstance already pointed out in this article, while dealing with the export trade from British Burmah, that the rice exporting vessels only clear nominally from India for the United Kingdom, but "await orders" for their real destination on arrival, which may be to any quarter of the world, and that the exports, which are accordingly registered in India for the United Kingdom, are, in fact, not imported into England, and do not therefore enter into the home returns. Similar discrepancies to those which exist between the Customs Returns of India and Great Britain will be found to exist in the returns of all other countries that trade with one another. Even between such neighbourly countries as England and France there is a discrepancy between the Annual Trade Returns amounting in value to ten millions or twenty millions sterling yearly, on the side of excess of exports from France. It is indeed quite certain that we have no reason to distrust the accuracy of our Indian Statistics of Trade.

The subject of the Rice Import Trade into Great Britain will be

Prices current of rice supplemented by the subjoined statement in London.

which shows the ordinary prices current of cleaned rice in London as they averaged in 1873, and opened in the January of the present year. The prices are those of cleaned rice per cwt. according to the Weekly Rice Circular issued by the London Rice Brokers Association, January 2nd, 1874.

		1873.	1874.
		s. d. to s. d.	s. d. to s. d.
<b>BENGAL—</b>			
Good to fine white, per cwt	...	13 0 „ 13 6	15 0 „ 16 6
Middling to good middling	...	11 6 „ 12 6	13 6 „ 14 6
Ordinary	...	10 0 „ 11 0	11 0 „ 12 0
Broken	...	10 0 „ 10 6	10 6 „ 11 0
Askoolie	...	10 0 „ 10 6	11 6 „ 12 0
Dacca and Burdwan	...	9 3 „ 10 0	10 6 „ 11 0
<b>BALLAM AND MOONGHY—</b>			
Good to fine	...	9 6 „ 10 0	12 0 „ 12 6
Ordinary to good middling	...	9 0 „ 9 3	11 0 „ 11 6
Casla	...	8 0 „ 8 3	10 0 „ 10 6
<b>MADRAS—</b>			
Ordinary to good		11 0 „ 11 6	11 6 „ 12 0
<b>BURMAH—</b>			
<b>ARRACAN—</b>			
Necransie, ordinary to good	...	8 9 „ 9 0	10 9 „ 11 3
<b>RANGOON—</b>			
Good to fine	...	9 6 „ 9 9	11 0 „ 11 6
Ordinary to middling	...	9 0 „ 9 3	10 3 „ 10 9
<b>BASSEIN—</b>			
Good to fine	...	9 6 „ 9 9	11 0 „ 11 3
Ordinary to good middling	...	9 0 „ 9 3	10 3 „ 10 9
<b>MOULMEIN—</b>			
Good to fine	...	9 3 „ 9 6	11 3 „ 11 6
Ordinary to good middling	...	9 0 „ 9 3	10 9 „ 11 0
<b>JAVA—</b>			
Good to fine	...	14 0 „ 19 0	no stocks.
Ordinary to good middling	...	11 0 „ 13 0	do.
<b>SIAM—</b>			
Garden	...	9 6 „ 10 0	no stocks.
Field	...	7 6 „ 8 0	do.
<b>SAIGON—</b>			
Round	...	9 0 „ 9 3	no stocks.
Long	...	7 6 „ 8 0	do.
<b>JAPAN—</b>			
Japan	...	.. ..	14 6 to 15 6
<b>MADAGASCAR—</b>			
Madagascar	...	.. 11 0 „ 13 0	no stocks.

In conclusion the writer has tabulated for convenience sake the summarized results that have been arrived at in the course of this article regarding the exports and imports of rice. In the left-hand column of the table below are shown the approximate average total export produce of the rice producing countries excluding re-exports, and in the right-hand column appear the average total imports of the rice consuming and importing countries:—

*Abstract general statement showing the sea exports and sea imports of rice in the world.*

EXPORTS FROM		IMPORTS INTO	
	Tons.		Tons.
Bengal about.....	500,000	United Kingdom, Europe, Australia, and America, about .....	800,000
Madras .....	100,000	China, &c. ....	320,000
Burmah.....	700,000	Straits, &c. ....	100,000
Saigon .....	250,000	Ceylon, &c. ....	150,000
Siam .....	150,000	Mauritius .....	125,000
Java .....	40,000	Bourbon .....	7,500
Italy .....	70,000	West Indies... ..	40,000
Spain.....	8,000	Arabian and Persian Gulfs .....	60,000
Miscellaneous .....	22,000	British India (chiefly Bombay).....	200,000
		Miscellaneous. ....	37,500
<b>Total of sea Exports ...</b>	<b>1,840,000</b>	<b>Total of sea Imports ...</b>	<b>1,840,000</b>

II. J. S. COTTON.

## ART. VI.—INDIAN FAMINES, AND THE DUTY OF GOVERNMENT IN CONNECTION WITH THEM.

**I**N our former article on the above subject there were some points which we treated more cursorily than we should have done, but for the limited time and space at our disposal, and into which we now propose to enter more fully; others, which it seems desirable to review in the light of the criticism which our previous remarks have elicited.

The question of the prohibition of exports was dealt with from a purely economical point of view. We pointed out that it was a question between the comparative importance of immediate and temporary needs and future permanent interests; that the stoppage of an export trade for even a single season, generally involved more or less risk of its diversion into other channels, a liability which we might have illustrated by the permanent transfer to this country of a considerable portion of the Russian trade in oil-seeds, owing to its temporary suspension during the Crimean War; and that one powerful argument against rashly incurring this risk, was the circumstance that India, in the surplus produce normally exported by her, possessed what was in fact a surplus store upon which to draw in case of emergent necessity at home.

It has been objected that the risk of the diversion into other channels which would arise from the suspension of the Indian rice trade, for a single year, is so small as to be not worth consideration. Probably, the same would have been said of the linseed trade of Russia at the commencement of the Crimean War. The fact is that the risk is an indefinite one; and the most which can be said in extenuation of it, is that, up to a certain point, the shorter the period during which the prohibition lasted, the less considerable it would be.

The *Hindoo Patriot*, to which we are indebted for the most intelligent criticism on our article which has appeared, brings what at first sight appears a much more formidable objection to our argument regarding the value, in a year of famine, of that surplus cultivation which, in ordinary years, furnishes the supply for exportation. The writer says: "No doubt our exportation creates a surplus, but if any portion of that surplus is prevented from going out by high prices, is it any proof that our exports benefit us in our famines? Suppose the average export of rice from Bengal is 300,000 tons per annum, and that it comes down to 100,000 tons in a year of famine in consequence of a rise in

price. Does this difference of 200,000 tons, or any portion of this difference speak in our favour?

We think that, before it can be made to do anything of the kind, it must be proved that the quantity of rice produced by us has fallen short by more than two-thirds of the usual quantity."

We presume that in the last sentence of the above passage, "more than two-thirds" is a clerical error, for *less* than two-thirds. The *Indian Economist* makes virtually the same objection to our argument, when it says "Of what use is an insurance against scarcity, if in a season of such disastrous failure as the present, the margin is still to be held sacred for export? 'Having no import trade in food,' the people, we are assured, are happy in growing year by year more food than they really want, since the surplus becomes a sort of insurance against seasons of failure. Plainly so, but only upon the supposition that the surplus is retained in the country at such seasons for home consumption. Of what value is it otherwise? In round figures, the people have 34,000,000 acres of land under food for their own wants, and another million acres for the supply of the export demand. Now, if in a season of scarcity, when the 34 million acres have yielded no more than the usual produce of 20, the people can but add the produce of the million acres for export thereto, they are gainers by so much, but only upon the supposition that they retain it. The export demand, in so far as it is an insurance against such seasons as the present, might plainly as well cease, unless the demand is to be waived at such periods. Unless the export is prohibited, the growth of a surplus for the foreigner in ordinary years becomes the direct occasion of aggravating the sufferings of the people; and it is most strange that this should be overlooked. The export demand, by the supposition, is a normal drain of so many hundred thousand tons a year, representing the produce of the margin of soil devoted to its growth. Unless, then, this demand be suspended or prohibited when failure has occurred, the people are exposed to a heavy, gratuitous competition from this demand upon their already narrow resources. Say, 'the harvest has yielded, as now, but one-third of the usual quantity, and that the export demand represents the ordinary produce of a million acres. It is then clear that if the export demand is to be satisfied, it will this year absorb the produce of *three* millions of acres, instead of one, and this demand, instead of mitigating the scarcity, will indefinitely aggravate it, by competing with the people for possession of their already narrow reserve. It is strange, we say, that this fact should be overlooked. If the existence of the export demand is to be of any use whatever to the people in periods of dearth, it can only be by stopping the export at such

seasons altogether, and retaining this margin of produce for home consumption. To secure myself against a want of potatoes, I may choose to grow enough in ordinary years for myself and my next-door neighbour, but if, when failure comes, and the land has not yielded enough even for myself, I am to admit his claim to an equal share thereof—it is clear that I had better have left the export business alone. There is this peculiarity, too, in the export demand for rice, that it is the demand of a competitor prepared to pay almost any price for it. We commend this very obvious reflection to Mr. Furrell, who lays great stress upon an argument that is plainly a fallacy."

Doubtless, in order that the export reserve to which we have been referring, should, in any given season of scarcity, prove beneficial to the country, it is essential that the proportion of that reserve prevented from going out of the country, should be greater than the proportion which the deficiency in the crop bears to the total out-turn.

If the deficiency amounts to one-third of the crop, then it is necessary that a normal export of say six lakhs of tons, should be reduced below four lakhs before it can be said to benefit the country. Whether the natural rise in prices, resulting from a scarcity would, in any given season, lead to so great a reduction as this, would depend a great deal upon the state of stocks and prices elsewhere, that is, it would depend, to a great extent, upon the point at which the rise in price might subject Indian rice to competition with that of other countries. Our argument, however, is concerned not with any particular season of scarcity, but with the general question of the benefit of such a reserve as that referred to in the long run; not with the present alone, but with the future also. Nor is the usefulness of surplus production confined to the case of a spontaneous rise of prices diverting to home use a greater proportion of it than that above indicated. The objection of the *Indian Economist*, and, by implication, that of the *Hindoo Patriot* assumes that our condemnation of the prohibition of exports is absolute and unconditional. But this is not the case. We distinctly stated in our article that it was quite conceivable that the actual emergency might be so pressing as to render it necessary to prohibit exportation in spite of all considerations more remote than that of the immediate saving of life. We urged the argument under discussion not as a ground for never prohibiting exportation under any circumstances whatever, but as a reason against hastily adopting such a measure in the absence of extreme necessity. Our argument, in short, is this: By prohibiting exportation, even for a season, you incur more or less risk of inflicting a permanent injury on the export trade. You cannot correctly estimate the extent of this injury, which may be of any magnitude, from the loss of a few

customers to the entire extinction of the trade. Abstain, therefore, from adopting such a course without necessity, in order that you may be able to avail yourself of it in case of necessity.

It is perfectly true that, as the *Indian Economist* says, your reserve is of no advantage to you unless you use it. But the same may be said of any reserve. On the other hand it is of the very nature of a reserve that it should not be used except in a case of absolute necessity.

The more the export trade of India is fostered, the greater will be her surplus production over and above her own wants in ordinary seasons; and the greater this surplus production, the larger will be the area from which it will be possible for her to draw her supplies in case of such a famine as would justify the prohibition of exportation. On the other hand, every thing that injures the export trade tends to reduce this area, and so far to render unavailable the very remedy our critics advocate as the most effectual that could be adopted.

There is one point on which, though evidently in doubt as to his interpretation of them, the writer in the *Hindoo Patriot* has probably misapprehended our views. We refer to the subject of importation in connection with famines.

On this point the *Patriot* says: "Of all the measures which it is necessary for the Government to undertake in order to avert the danger of the famine, importation of food from foreign countries seems to us to be the one which alone can be of any real use and efficacy. It is to be regretted that Mr. Furiell has spoken rather vaguely and indistinctly on this point. One thing, however, he has said very clearly and pointedly, and that is that importation from abroad must involve 'enormous expense.' But is that a reason why no food should be imported from foreign countries? Are not millions upon millions spent upon public works of questionable utility and hundreds of millions spent in wars and useless quarrels? And is the duty of saving a whole nation from death less serious, less solemn, less sacred, than that of erecting a barrack or fighting a foe who may not be in the wrong?"

We quite agree with the writer of the above that, in a famine of any severity, the remedy which will be most effectual, and which will be necessary to the full efficacy of other remedies, is importation. It is possible that, in the little we said on this head in our former article, we did not express ourselves so clearly as we might have done.

When we spoke of importation from abroad as being a means which could not be depended on to "prevent" famine in India, an ambiguity in the word "prevent" perhaps rendered us liable to misinterpretation. As we can find no more suitable word, we will explain what we mean by an example. In a country like

England, where the normal prices of corn do not differ very widely from those prevailing in neighbouring foreign markets, and a certain amount of importation takes place even in ordinary seasons, famine is impossible, except in the case of a failure of the harvest affecting a great part of Europe; for every rise in price is immediately responded to by an increased influx of foreign corn. Such a country may fairly look to importation as a standing guarantee against famine.

When we say India cannot depend upon importation to prevent famine, we mean that she is not in the above position, the extent to which prices must rise in order to attract foreign corn being such that much of the mischief of famine will have supervened in the interval. It is only extraordinary action on the part of Government that can bring importation into play at an earlier period, and such action comes under the head of cure rather than of prevention. There is nothing to be said against it in case of necessity, but there is everything to be said in favour of doing all that is possible and reasonable to prevent such necessity arising.

It still remains for us to consider what may be called the equitable objections to the prohibition of exportation; and they are of a very formidable character.

In the first place the measure would be an inhuman one. A large proportion, probably, on the average, at least three-fourths of the annual export, is destined to feed the Indian population of various colonies. Equally restricted to rice as their staple food, this population is in a far worse situation than India even in a famine, as regards the means of obtaining it; for having no production of its own at all, it is absolutely dependent upon the supplies it obtains from abroad. An indiscriminate stoppage of the exportation would, therefore, result in inflicting on it an amount of misery much more serious than would be prevented by the comparatively trifling addition to the food supply of this country which such a measure would secure, even if this addition all went towards the relief of the distress. Indeed, the effect of this measure would be the mere cheapening of rice in one place at the cost of creating absolute dearth in others.

But in the case of the present famine, the distressed districts would not obtain the full benefit, or nearly benefit, of the diminution of price. For this diminution would take place first, not in the distressed districts, but at the ports of export, or in the producing districts; and one of its immediate results would be to stimulate consumption in these places, so that a considerable portion of the addition made to the food supply of the country would never reach the distressed districts at all.

We have, indeed, heard it urged that the Colonies could obtain



their rice elsewhere, as the Indian Government is now obtaining rice elsewhere, to supply the place of that exported. If six months notice of the prohibition were given, this might possibly be the case. But a long notice would have been impossible in the case of the present famine, and, from the nature of the case, would, in all probability, be impossible in the case of any famine; and, looking at the distance from the possible sources of rice supply of most of the colonies concerned, it seems very doubtful whether, in the ordinary course of trade, the arrangements necessary could be made in time. As to extraordinary action by the Colonial Governments for the purpose, it is evidently much easier for a single Government in the immediate neighbourhood of the rice producing countries, than it would be for them, to operate in this way.

Had Lord Northbrook prohibited exportation, therefore, it would have been necessary to have exempted these colonies from the operation of the measure; and, with this limitation, the prohibition would have added very little to the stock of food in the country.

Then we have to consider the effect which the prohibition would have on holders of rice in this country.

In our previous article we remarked, on this head, that it would be easier for the Government to compensate the traders whose interests were affected, than to import food, or compensate its subjects for the deprivation of it.

As regards actual contracts, no doubt, this is true. But the holders of such contracts would be a very limited class compared with the large body of holders of grain for re-sale in the country in the open market; and it would be practically impossible for the Government to compensate the latter without exposing itself to wholesale fraud, since, even if the sufferers could be discovered, their losses could not be ascertained.

Let us consider for a moment what are the several courses open to the Government in a crisis like the present, for the purpose of increasing the food supply of the country and relieving distress, and what is likely to be the effect of the adoption of each of them on the interests of the holders of grain, on those of the community at large, and on that portion of the population who stand most in need of relief. The Government may simply prohibit exportation, and then fold its hands; or it may prohibit exportation and at the same time engage in relief operations; or it may adopt the plan which it has followed in the present instance, of allowing exportation to take its course and counteracting its effect by extensive purchases of grain, at home or abroad, or both at home and abroad.

The first of these courses would result primarily in a heavy fall in the price of grain, not in the famine districts, but in the large

producing districts and at the places of export. As a direct consequence of this fall, the holders of grain, at the time of the prohibition, would be involved in serious loss, while consumption would be largely stimulated throughout the tracts immediately affected by the fall. By and bye, as part of this grain found its way, in the ordinary course of trade, to the distressed tracts, a fall in prices would take place there also ; but it would be a comparatively slight fall, and the Government would find itself still responsible for a wide area of unrelieved distress.

None, however, of those who have advocated the prohibition of exportation, have proposed it as a substitute for relief operations on the part of Government. What has been urged is that, by prohibiting the exportation, Government would have been able to buy its grain at cheaper rates, and to have thrown it into the distressed districts more promptly.

No doubt the prohibition would have been attended by the first of these results. The cost of the relief operations would have been sensibly less. But whence would the saving have come ? Obviously out of the pockets of the grain merchants. In other words, a portion of the burden of relieving the population of the distressed districts would have been transferred from the shoulders of the community at large to those of a limited class of the community. To some persons it may appear that there would have been no great injustice in this. The loss of the grain merchant, they may say, would be merely a deduction from the extraordinary profits he had calculated on making out of the necessities of his neighbours. But we cannot take this view of the case. We pointed out in our former article that a season of scarcity is by no means necessarily a season of extraordinary profits to the grain merchant. In any case such profits would be confined chiefly to those who might have purchased their stocks from the producers. But grain goes through many hands in its progress from the producers to the exporters, and there is very little room to doubt that a large portion of the saving to the community which would have resulted from prohibiting exportation without long notice, would have come, not out of the extraordinary profits, but out of the ordinary commercial profits, or out of the capital, of the merchants in whose hands it might have happened to be at the time. Now, if there is one thing clear about the cost of meeting a great public calamity of this kind, it is that, on grounds of mere equity, it should be met in fair proportion by all the taxable classes of the community. Any measure which tends to shift it on to the shoulders of a particular class is on that ground alone deserving of unqualified condemnation.

As to the gain in point of time which, it is said, would have resulted from the adoption of the policy we are considering, we are

persuaded that there would either have been none, or it would have been so insignificant as to weigh nothing in the scale against the iniquitous consequence just pointed out. The events of the last few weeks have shown conclusively that, with the carriage available, grain could not have been thrown into the distressed districts more rapidly than it has been, even if the entire quantity purchased and to be purchased by the Government had been in Calcutta within a fortnight of the cutting of the crop. From the time the Government commenced its relief operations, the supply of carriage has been constantly behind the supply of grain in hand for despatch. The sole advantage of the prohibition would have been the saving in the price of the grain, and this saving would have been effected at the cost of a great wrong.

Were the position of the exporting districts in relation to those in which relief is required, different to what it is, the argument in favour of prohibiting the exportation for the sake of gaining time might be much stronger. If, for instance, the bulk of the grain destined for exportation passed through the distressed districts themselves; or their immediate neighbourhood, a large economy of both time and carriage might result from intercepting it. But, so far from this being the case in the present instance, it takes as long, if not longer, to convey grain from the great rice producing districts of Eastern Bengal to Behar, as from Calcutta.

One point in connection with the question remains to be considered. There is some reason to fear that a large portion of the grain which the Government is importing, is less adapted to the requirements of the people it is intended to feed, than grain purchased in the country would have been. We are tempted to say that people who prefer hunger to changing their food from one kind of rice to another deserve to starve. But, in any case, we do not think it can be shown that the recourse by the Government to Burmah for rice was a necessary result of its policy of allowing exportation. Large quantities of grain were bought in the Indian markets, and economical motives alone prevented more being so bought.

We discussed in our previous article the mode and rate of payment of labourers on relief works.

The rule we then insisted on, of course, involves the application of a strict labour test. If, in order to guard against injury to private employers of labour, it is necessary that the rates of remuneration should not be sensibly higher than the market rates, so long as those rates are sufficient to procure the minimum quantity of food required to maintain a labourer in ordinary health, it obviously follows that a full day's work, according to the usage of the country, should be required from day labourers, while, as regards piece work, the question does not arise.

In the case of able-bodied labourers, indeed, it would be difficult

to discover any valid argument for departure from this rule. Neither the fact that Government is the employer of their labour, nor that the time is one of scarcity, can furnish any excuse for extraordinary idleness on the part of such persons. Apart from the interests of their employers, a powerful reason for insisting on the full tale of work is to be found in the necessity of guarding against the relief works becoming a refuge for idlers. On the one hand it would be a serious injustice to encourage an unnecessarily wasteful expenditure of the tax-payers' money, by which, it should be constantly kept in mind, the cost of the works, so far as they prove unremunerative, will, in the end, have to be met; on the other hand, since the resources of Government are limited, to encourage idlers is to injure the honest poor, by precipitating their exhaustion. The object of the works, it must be remembered, is to supplement the labour fund of the country, not to throw upon the State the burden of finding gratuitous food for its labouring population, and thus contracting the supply of efficient labour.

But these arguments, it will be urged, apply only to able-bodied labourers, whereas there are the aged, the infant, the emaciated, and those unused to hard labour to be provided for. This is, no doubt, true; but it does not seem to us to affect the question of the labour test as far as the principal relief works are concerned. Such relief works are not the proper place for these classes of people. As to the sick and infirm, it is not only highly dangerous, from a sanitary point of view, that they should be encouraged to congregate together on great public works, where shelter must generally be insufficient, and where if epidemic disease broke out among them, circumstances would favour its spread among the healthy in the highest possible degree. In the second place, it would be impossible to work a differential labour test effectively without complicated arrangements, which would quadruple the amount of supervision required and thus add largely to the cost of the works. This class ought, both in their own interests and in those of the public at large, to be provided for as near their homes as possible, after being subjected to a medical, or quasi-medical test. The object in view should be to restore them to health as soon as possible, and then to draft them off to the relief works. For this purpose, they should receive medical care as well as food, and in the meantime, it would, in many cases, be necessary to excuse them from labour altogether. For those unused to hard labour, light labour should be supplied, care being taken that no persons are included in this class whom the customs of the country do not absolutely excuse.

There is a considerable class of persons who, though used to agricultural labour, would be very loth to work as navvies on public works, or even to work in the fields for hire. The system of

aiding the ordinary agricultural work of the country, advocated by us in our former article, would exactly meet the case of this class; and it seems to us to be a serious defect in the present scheme of relief works that it does not include, or includes to a very limited extent, such a system.

JAMES W. FURRELL.

## ART. VII.—OUDH AND OPTIMISM.

Tales of rustic happiness—  
Pernicious tales ! insidious strains !  
That steel the rich man's breast,  
And mark the lot unblest,  
The sordid vices and the abject pains,  
Which evermore must be  
The doom of ignorance and penury !

*Coleridge.*

**H**OWEVER vague and various may be the notions entertained by Englishmen in England of the past history, the present position, and the future prospects of their countrymen in India, it may be said with tolerable confidence that the general feeling on the subject is one of complacency, and that almost every one who ever bestows a thought on India is convinced that our Government of the country is a blessing to its people and a triumph of civilisation. And it is impossible to deny that British India does present an imposing spectacle to the world, and that it is natural for an Englishman to feel a not ignoble satisfaction at the thought that some two hundred millions of Asiatics are being ruled at once, as he believes, vigorously and beneficently, by little more than one hundred thousand of his countrymen. The Anglo-Indian Empire may not unfairly be called the most remarkable experiment in governing which the world has ever seen. As regards peace, order, and general tranquillity, never before have such vast results been produced by such limited means. Life and property are probably as secure from violence as in most European countries ; the authority of the law is unquestioned ; and the purity of the tribunals by which it is administered, so far at least as they are composed of Europeans, beyond suspicion. These are the most obvious, if not the only obvious, aspects of the Anglo-Indian Empire ; and it is natural that the contemplation of them should inspire the British public with feelings of pardonable pride, and result in a widespread impression that India is the best possible outlet for such cultivated energy as can find no field for action at home.

It would be, of course, impossible to estimate with any approach to precision the degree of influence which this impression exercises among the motives which year by year draw men to fill the ranks of the Civil Service. Without, however, taking too sanguine a view of human nature, or at least of the nature of competition-yallals, that

“ juvenum recens  
Examen hoc timendum  
Patibus,”

it may be safely affirmed that the belief that an Indian career affords a wide sphere of usefulness, and that a faithful discharge of the duties of an Indian civilian necessarily means an advancement of the cause of progress, is the main motive with some, and a more or less influential motive with almost all of those who adopt it. It would be too much, probably, to say that a majority or even a large minority, come to this country animated by anything like steady or sustained enthusiasm for the lofty idea underlying the concrete details of the working life before them; but few can fail to feel that the career which they have chosen is at least one which ought to awaken enthusiasm, and which in their best moments they will never regret having adopted. Such a belief is the best compensation which a man can have for the deprivations of exile. But what if the basis on which it rests be cut from under it, or even be so far weakened as to render the belief itself tottering and insecure? To find that one has based one's life on a delusion is one of the most bitter of experiences, and to suspect that this is so, one of the most painful of doubts. It may seem a somewhat violent transition to pass to the condition of Oudh from such general reflections as these, but it is only a reversal of the train of thought which suggested them.

*Quem Deus vult perdere prius dementat.* Never was this grim old saying more grimly illustrated than it was in Oudh at the time of the Mutiny, when the peasantry, or as many of them as were sufficient, under the circumstances, to pass for the whole, committed one of the most deplorable acts of infatuation on record by throwing themselves into the arms of the revolted Taluqdárs, one-half of whom were their natural enemies, and five-sixths of the remainder their exceedingly doubtful friends. How far this fatal step was due to terrorism, and to what extent, if at all, it was spontaneous, are questions which it would now be difficult, if not impossible, to answer. But whatever the cause, the result was the Taluqdári Settlement. The effect of this identification of themselves by the peasantry with the Taluqdárs was of course enormously to strengthen the hands of the official party who desired to maintain and extend the Taluqdári system, and proportionally to weaken the advocates of a settlement made with the village zamindárs. This unnatural alliance rendered the extinction of the Mutiny by any other means than that of offering their own terms to the Taluqdárs a task of so much difficulty and danger, that it can hardly be matter of wonder that those terms were offered. It is impossible now not to regret that we did not persevere, and save the people in spite of themselves even by the slow, costly, and difficult process of destroying fort after fort until the Mutiny was stamped out. But, though matter

of regret, the policy adopted can hardly be matter of wonder. The summary settlement of 1856 made with the village communities, was doubtless one of the main reasons of the discontent of the Taluqdárs, which, combined with the disaffection of the native army, so largely recruited from Oudh, culminated in the Mutiny.

It was then that so many villages which the summary settlement had recognised as independent landholders cut their own throats by joining the Taluqdárs on whom they had previously been dependent, thus putting at the service of the upholders of the Taluqdári system an argument which, under the circumstances, was so nearly irresistible that one cannot be surprised at its success.

'The people,' it was argued, 'evidently regard the Taluqdárs as their natural leaders. Why, then, should we go out of our way to force on them a more democratic system for which their own conduct shows them to be unfitted? Let us make terms with the Taluqdárs and the country will be pacified.'

Military considerations, also, tended to make these counsels prevail. Besieging numberless petty forts in the hot weather, losing men at every one, is about as inglorious and heart-breaking a task as can be proposed to a General, and it is not surprising that Lord Clyde hesitated to undertake it. The work, if attempted, would probably have cost many lives, and have prolonged the disturbances in Oudh for another year, and though the teaching of subsequent events may make us regret the course adopted, we can hardly blame the men of the time for acting as they did.

It was determined, then, to pacify the Taluqdárs by allowing them to engage for the payment of the Government revenue in all villages included in their Talukas, and on this principle the second summary settlement, which followed the Mutiny, was based.

The regular settlement began in the Pratāp-garh district in 1862. The latest to commence was that of Gonda in 1868. In Gonda and Faizābād it is still incomplete. Thus, within eighteen years, Oudh has thrice enjoyed the blessing of being "settled." Of the merits of this third settlement it would be difficult to say anything which should apply to all districts alike. It was not, perhaps, taken as a whole, much too heavy, though flagrant instances of over-assessment are by no means unfrequent. Inequality and too rapid increase of assessment may be taken to be its chief defects. The theory on which it rests is that each village should be assessed separately, and that the Government demand should amount to one-half of the gross rental or *nikāst khām*, which again, is generally estimated at one-third of the gross produce, or *paidāwār*. The other half of the gross rental was appropriated to the Taluqdār and subject, in the case of subsettled villages, to deductions varying from twenty to seventy per cent in favour of



the under-proprietors, and in many other cases to smaller deductions in favour of ex-zamíndárs, who were found entitled to hold a certain quantity of land, called *Sír*, or *nánkár*, or *daswant*, at a lighter rental than that ordinarily payable.

Estates not included in a Taluqa are called *zamíndárí* or *mufríd* and are generally the property of a whole community. Their tenure only differs from that of subsettled villages in that it involves no payment to a Taluqdár. After these come the tenants with a right of occupancy—heritable, but not transferable, who are descendants of persons who had a proprietary right in the village in which the lands are situated within the thirty years next before annexation—and who pay a rent less by two annas in the rupee than that payable by an ordinary tenant. Next in the scale come those ordinary tenants, or tenants-at-will, whose rent is entirely a matter of agreement between them and their landlords. Below these again are the great mass of day-labourers, some of whom hold a few biswas of land, while the rest have no land at all. These labourers and tenants-at-will form the great majority of the agricultural population, and consist mainly of men of the lower castes. Such is a brief outline of the various agricultural classes of Oudh. These classes form the great majority of the whole population, and by the nature of the answer to the question whether their condition is progressive, stationary, or retrograde, must the merits of our administration of the province be mainly judged.

Speaking broadly, and for purposes of convenience, the *mufríd zamíndárs*, under-proprietors, ex-under-proprietors, and tenants with a right of occupancy, may be considered as one class. They all either have, or had, or are descended from those who had, proprietary rights in the soil, and with very few exceptions are either Brahmans, Rájputs, or Musalmáns.

We thus get four classes :—

- 1 Taluqdárs including those smaller landlords, who chiefly differ from Taluqdárs in not holding sannads.
2. Village brotherhoods, whose common feature is, as remarked above, that they “either” have, or had, or are descended from those who had, proprietary rights in the soil.”
3. Ordinary tenants, or tenants-at-will.
4. Day-labourers, who may or may not hold a small patch of land, but who mainly subsist by working for hire.

What, then, is the condition of these classes ?

The answer may to a certain extent be gathered from the pages of the Chief Commissioner's Revenue Administration Report for the year ending 30th September 1872. An embarrassed and impoverished body of landlords, a depressed and decaying yeomanry, a struggling, hand-to-mouth tenantry, and a residuum of half-starved

and consequently predatory day-labourers, are the main features of this dismal story. These official utterances possess in a somewhat unusual degree the merit of candour, but even they do not reveal the whole state of the case. The woes of the Taluqdárs, almost infinitely the least important part of the agricultural population occupy a disproportionately large space. The lower the class, in short, the less is said of it. The reason probably is that the report is mainly compiled from information supplied by Commissioners and Deputy Commissioners who, in ordinary times, see comparatively little of the lowest strata of society. It is in the rent courts of first instance, and in the subordinate criminal courts that the real, grinding, abject poverty and distress of the agricultural class, is exhibited in the strongest light. It is not too much to say that nine-tenths of the judicial work of an Assistant or Extra-Assistant Commissioner is divided between trying emaciated wretches for stealing a few stalks of sugarcane or a few handfuls of peas from their neighbours' fields, and playing the part of butcher to the Taluqdárs by decreeing heavy arrears of rent, which he knows they can never pay, against broken-down Rájpúts and Brahmans, utterly unable to state their case, and with no arguments but lies and lamentations. The one consolatory reflection which relieves the gloominess of the latter part of this dismal task is that the ludicrously imperfect adaptation of the Rent Act to secure the ends aimed at robs a decree for rent of much more than half its immediate terrors, and that though the holder of the decree may ultimately utilise it in ejecting the judgment-debtors, the only immediate satisfaction which he is likely to obtain is the attachment of a few seers of grain, two or three lotahs, and a bedstead. If, indeed, the actual corresponded to the theoretical working of the Act, its application to a country assessed as many parts of Oudh are assessed at the present moment would have long ago utterly ruined many of the Bráhman, Rájpút and Musalmán brotherhoods, who still continue to carry on the struggle against the Taluqdár and Tahsíl-chaprásí.

The condition, then, of the agricultural population of Oudh is admittedly not what it should be. The question necessarily arises, What are the causes, and what the remedies of the evils under which they suffer? The causes may be divided into two classes, those which are beyond our direct control, and those which are within it; and the former are unfortunately much the most widespread and potent. They may, indeed, be summed up in two words—over-population, and scarcity of food. Oudh is probably, next to China, the most densely peopled country in the world. The average number of souls, or bodies of the description commonly known as human, is 469 per square mile, or 125 more than in England and Wales. Oudh is, to quote the last Administration

Report, "a little smaller than Scotland, a little larger than Denmark, but with a population more than double that of both put together," amounting, according to the census of 1869, to nearly eleven millions and a quarter. And almost the whole of this enormously dense population is supported directly from the soil, for such manufactures as did exist under native rule are rapidly dying out under the influence of free trade. The remarkable fertility of the soil enabled it in the days when railroads were, not, and roads could hardly be said to be, to maintain its population with comparative ease. But of recent years greater security and improved communication have led to large exportation of grain, which, combined with the fall in the value of money, has vastly raised prices in Oudh itself.

The effect thus produced on the condition of the labouring class, four-fifths of whose expenditure is on food, has been disastrous. The amount of money in their hands has, it is true, increased, but in a proportion by no means equal to the diminution in its purchasing power. The money-wages of common labour have increased, speaking generally, from fifty to one hundred per cent. The man who formerly got an anna a day, now gets six pice or two annas. He who got six pice, now gets two annas, or, if very lucky, two annas and a half. But the price of grain has meanwhile risen from two hundred to three hundred per cent. In the days of the Nawâbi, a maund of flour could be purchased for a rupee. At the present moment a rupee will purchase but eleven seers, and will seldom or never purchase more than fifteen or sixteen seers. Gram, of which a maund and a half or two maunds could, twenty years ago, be bought for a rupee, now sells at sixteen seers, and is seldom or never at a lower rate than three or four and twenty. The inevitable result of this great diminution of purchasing power has been the worst physical evil which can befall a labouring class, a serious diminution of the standard of living, a reduction of the practical minimum of subsistence. People who formerly lived on flour, now live on peas and other coarse grain. Those who formerly lived on coarse grain cannot now get a sufficiency of that. As far, then, as regards the lowest of the four classes under which the rural population has been distributed, the results of our rule have not been beneficial. For what good can the most enlightened and vigorous administration, with tranquillity never so profound, with never so many roads, bridges, schools, jails, police-stations, dispensaries and cutcherries, do the average Indian culi at all commensurate with the ever-present evil of being underfed? Of what profit are all these to Sukhu, Chamâr, or Shio Charan, Ahîr, and their fellows? They were just as happy going along the old *kachcha* cart-track as they are now upon the most scientifically constructed of *pakha* roads. Once or twice in a year, perhaps,

they might have had to pay a pice to the ferryman who took them across the river which they now cross without payment by a bridge. Their children rarely go near a school. Dispensaries can do little to keep underfed bodies in a healthy condition. The thāna, the cutcherry, and the jail they know but too well. The jail, indeed, is probably the one bright vision with which we have enlightened the gloomy mental horizon of Sukhu, Shiocharan and their brethren, as of a place where they can at the worst get a chapati to eat and a blanket to cover them. But the prospect of even such a rapturous possibility as this can hardly compensate for the gnawing discomforts of chronic hunger. This rise in the price of grain and fall in the value of money cannot, of course, be imputed to our Government as a fault. They are effects of causes such as improved communication, increased security of property, which has caused money to be circulated instead of hoarded, and import of bullion in payment of exports. But the doleful fact remains that, as a result of our rule, life has become very much harder for the day-labourers of Oudh.

Let us next take the penultimate grade of the rural population,—the ordinary tenants, or tenants-at-will—and consider how their condition has been affected by our rule. The operation of the cause which has so deeply depressed the landless or nearly landless labourers, the diminution of the purchasing power of money with respect to food, has in their case been considerably modified. The cultivator, as opposed to the mere labourer, has a portion of the commodity which has been rising in price to sell, and to that extent benefits by the fall in the value of money relatively to grain. So far as he is a consumer merely of his own produce, he is no better off than before; but so far as he is a seller, he is profited. And there can be no doubt that this cause has had a distinct *tendency* to improve the condition of the cultivator. There is reason, however, to fear that this tendency has been more than counteracted by two opposing causes, *viz.*, increase of population, and the constantly advancing influence of competition, and the corresponding decline of custom, as the determining agency of rents. As regards the first, it is impossible to say how far population has increased during the last eighteen years, but there seems every reason to believe that its growth must have been considerable. Where, as in India, prudential motives have absolutely no influence in restraining multiplication, the only checks that can operate are physical. Political tranquillity and freedom from any great or widespread epidemic have prevailed, and the only check has been want of subsistence.

The working of the second counteracting agency has been less obscure, and it is one which is deeply felt and deplored by the

people themselves. 'Formerly,' the writer has been told by men of this class, 'if our grandfather and father and we ourselves had always paid five rupees as the rent of our field, we had no fear of being called on to pay more. But now we are always afraid lest some one should come and offer our landlord a rupee or two more, and then we should be turned out.' The plain fact is, that the tenure of all ordinary cultivators either has become, or is rapidly becoming, *cottier* tenure, as defined by Mr. Mill at the beginning of Chapter IX of the second book of his *Political Economy*, that is, a tenure in which "the labourer makes his contract for land without the intervention of a capitalist farmer, and in which the conditions of the contract, and especially the amount of rent, are determined not by custom, but by competition." The train of ideas which we have introduced—individual right as opposed to family or tribe status, contract as opposed to custom—has vastly changed, and seems destined entirely to alter the conditions of agricultural life in India. And the change is one over which it is difficult to feel enthusiastic. It may, of course, be urged in its favour, that this breaking up of the old ties is a necessary step in the path of progress. The earliest state of historic man, it may be said, is corporate life, the life of the family and tribe. From this he has emerged in Europe and is emerging in India to the stage of individualism in which every thing seems to indicate that his next step will be towards corporate life again, but of a larger and grander kind, which shall include and find room for individuality, in a word, towards a system of conscious and voluntary association, chiefly, at first at least, industrial. Individualism is a necessary step to a higher mode of association, the co-ordination of the individual with the collective life. Now few persons, probably, will deny the justice and truth, on a large scale and in the long run, of such considerations as these. But it is, surely, difficult not to feel that they look, so to speak, far over the heads of the actual facts around us. The terms of the formula are too vast for it to be a safe guide for our practice. The periods of time which it involves to render it a trustworthy interpretation of history are centuries not years, or even decades. A state of things which it has taken Europe, roughly speaking, eighteen hundred years to reach, Oudh is not likely to go very far towards attaining in eighteen, or even eighty. In truth, these large generalizations are most dangerous rules for the guidance of our political practice. The principle of natural selection as exemplified in history is a grand and imposing spectacle, but it is not for us to identify ourselves so closely with the destruction of weaker by more vigorous types. Natural laws can take very good care of themselves; and the true function of the rulers of mankind is rather to temper and soften their working, to infuse, so far

as may be, an element of kindly human pity into the vast unconsciousness and impersonality of these tremendous agents, than to throw their influence, such as it is, into the descending scale, and to attempt the wholly superfluous task of assisting a chemical movement by mechanical means. "Wholesale moral arrangements," as Oliver Holmes happily says, "are so different from retail," and all consciously devised human efforts may be regarded as retail in contradistinction to the illimitable and ultimately irresistible march of Nature. Nor is this in any way to advocate a blind resistance to natural processes; rather is it to urge the duty of clearly apprehending the character and tendency of those processes, that so we may follow their movements and succour the unfortunates who have been crushed beneath the mighty wheels of the irreversible engine. We can never break the laws of nature; to attempt it is but to break ourselves against them; but we may do something, at least, to alleviate, if not to avert, the ruin of those whom these laws have overwhelmed. Progress, we have been told on high authority, is a march 'from status to contract,' and it is probably impossible—still more, probably undesirable—to reverse or materially alter this tendency. But it is both possible and desirable to make the change somewhat less bitter and ruinous to those whose lives, hitherto based on custom, are being broken up and overwhelmed by the subversive agency of contract.

To pass to the particular remedy which this particular evil appears to demand, let us turn to Mr. Mill. "Where a country is under cottier tenure, the question of perpetuity is quite second to the more important point, a limitation of the rent. Rent paid by a capitalist farmer, who farms for profit and not for bread, may safely be abandoned to competition; rent paid by labourers cannot, unless the labourers were in a state of civilisation and improvement which labourers have nowhere yet reached, and cannot easily reach under such a tenure. Present rents ought never to be arbitrary, never at the discretion of the landlord; either by custom or law it is imperatively necessary that they should be fixed."

This passage was written *à propos* of Ireland, but it is equally applicable to Oudh. Under native rule, such competition as did exist was on the part of the landlords to get labourers for their land; now it is just the reverse. It has been, indeed, or until the recent Irish Land Act, was somewhat the fashion to quote our land legislation in India as a model to which that of Ireland should be made to conform; but it would seem to be more nearly true to say that what Ireland was in her worst days of cottiers and conacre and rack renting, that Oudh, as regards all ordinary tenants, is, under the reign of competition, rapidly tending to

become. The following passage from the ninth chapter of Mr. Mill's second book applies with hardly any modification to the tenure of these cultivators at will :—

“ The produce, on the cottier system, being divided into two portions, rent, and the remuneration of the labourer, the one is evidently determined by the other. The labourer has whatever the landlord does not take ; the condition of the labourer depends on the amount of rent. But rent being regulated by competition, depends upon the relation between the demand for land and the supply of it. The demand for land depends on the number of competitors, and the competitors are the whole rural population. The effect therefore of this tenure is to bring the principle of population to act directly on the land, and not, as in England, on capital. Rent, in this state of things, depends on the proportion between population and land. As the land is a fixed quantity, while population has an unlimited power of increase, unless something checks that increase, the competition for land soon forces up rent to the highest point consistent with keeping the population alive. The effects, therefore, of cottier tenure depend on the extent to which the capacity of population to increase is controlled either by custom, by individual prudence, or by starvation and disease.”

There can be but little doubt as to the nature of the controlling causes at work in Oudh. A cottier system, and all the misery that such a system involves, is the goal towards which the ordinary cultivators of Oudh are steadily and rapidly tending ; and it behoves us fully to make up our minds whether this is, or is not, a desirable consummation. For if it is to be averted, there is little time to spare, and no time to lose.

The sorrows of the village brotherhoods the third in the ascending scale of the agricultural classes, have always, and naturally, attracted far more attention than the less romantic troubles of the simple tenants and the labourers. Is it not that we, like Sordello, have

“ . . . . . unconsciously contrived forget  
The whole, to dwell o' the points,”

and thought, like him, that we

“ might assuage  
The signal horrors easier than engage  
With a dim vulgar vast unobvious grief,  
Not to be fancied off, or gained relief  
In brilliant fits, cured by a happy quack,  
But by dim vulgar vast unobvious work  
To correspond.”

But their woes, though more picturesque, are none the less sternly real, and it is to be feared that the sympathy and attention

which their interesting nature has excited has done little to alleviate the sufferings of those who have to bear them.

The condition of the village brotherhoods, though theoretically better, is, it is to be feared, practically worse than it was in the time of the Nāwābī; it is true that under native rule they had no rights which they could legally enforce, and certain such rights we have given them.

But our general principle of maintaining the *status quo* in name has really altered it to their disadvantage. The native government and the Taluqdārs exercised powers which were unlimited by any law, and the village communities had no rights which could be called legal. But the fact that in the last resort the power rested with them, preserved them in most cases from extreme oppression, and they could generally resist the tax-gatherers with some chance of success. There were doubtless instances, not a few of hardship and tyranny and torture worse than any which could be found now, but our system of giving ourselves and the Taluqdārs powers which though theoretically less, are practically and in the long run, more stringent than those which the native government and the Taluqdārs had previously, seems to have reduced them to a dead level of poverty and discomfort. The possibility of successful resistance saved them at least from the crushing sense of being in the vice of an irresistible necessity. A state of chronic warfare with an enemy who, though bound by no rules, is not invincible, is, to people of the character and habits of the Oudh peasantry, less oppressive and disheartening than hopeless subjection to a power which, however well-meaning and observant of the laws of war, is at once exacting and irresistible. When we annexed the country, we found it in a state of anarchy and solution, and after sundry modifications, proceeded to crystallize it. In this process we have raised the depths and depressed the heights, while the general level of comfort is lower than it was. When a rigid system of law is superimposed on an anarchic country, the gain or loss of the conflicting elements in that country will be in proportion to their capacity or incapacity of adapting themselves to the new conditions, their ability or inability to comprehend and utilise the altered situation. Without forming any extravagant estimate of the mental calibre of the Oudh Taluqdārs, it may safely be asserted that they possess a larger measure of this adaptive faculty than belongs to the village communities, and the loss of the latter has been the gain of the former.

One of the principal causes of the depressed condition of the village brotherhoods is probably to be found in the fact that they have very generally been engaged in Settlement litigation and, whether successful or not in establishing their rights, have spent



large sums, both legally and illegally, in making the attempt. They hold their lands at more favourable rates than ordinary tenants, but the difference is seldom sufficiently great to compensate for the disadvantage under which they labour of more expensive and less industrious habits; and the litigation to which they have had resort to obtain this privilege, has too often left them not only without capital, but deeply indebted to the village money-lender.

Another cause which has done much to depress their condition is the great diminution of the only source of subsistence, besides the land, which was previously open to them. Great numbers of Brahman Thákurs and Musalmáns were, until the Mutiny, employed as soldiers in the service of the Company or in the local army, and as retainers of the Taluqdárs. The great reduction of the native army since the Mutiny and the abolition of the Oudh local force have greatly reduced the numbers of those who can thus find employment; while the establishment of the reign of law within the province has rendered the services of a large body of retainers or *dewálbands* no longer needful to the Taluqdárs. It may, of course, be said that such employment as this could not much increase the real wealth of the country, and that the application to the land of the additional labour thus released from unproductive employments must cause such an increase. But it must be remembered that though a soldier or a *dewálband* is not a directly productive agent, yet their pay was a distinct and very considerable addition to the resources of their families. The remittances of one or two soldiers, sons or brothers out of a family, often went a long way towards paying the rent of those who remained behind, and were almost an equivalent to a rent-free holding. Now that the extent of this resource is so greatly narrowed, the man who would formerly have been supporting himself elsewhere, and helping his stay-at-home brethren to pay their rents, is little more than an additional mouth to be fed. The labour of a Brahman or Rájpút, moreover, is seldom of a highly productive character, and in so densely populated and closely cultivated a country as Oudh can barely be held an equivalent to the cost of his own support.

While one great source from which rent was formerly paid has been thus diminished, the rent itself has been very largely increased. The current Government demand is heavier than it was under the summary settlement, by no less than forty-two per cent, and there can be little doubt that the rise of rents has been at least proportional to that of revenue. Cases are by no means uncommon where the amount payable by the under-proprietor has been more than doubled. It is impossible not to ask where the increase is to come from. No one, so far as is generally known, ever suspected the

village communities of being overburthened with a superfluity of wealth when the country passed into our hands; and even had it been so, and if the expenses of Settlement litigation had not relieved them of it, it is surely too much to expect that in a single year their habits should undergo so complete a change as would be necessary to enable them to meet so large and sudden an increase of demand. No very prophetic soul was needed to foretell the result, which is that the village brotherhoods are very generally and deeply involved in arrears of revenue or rent, and in accumulated debt. It has been too much forgotten that what we have to assess is not only land, but also *men*. It is practically impossible for a village divided and subdivided with infinite intricacies among a numerous brotherhood to pay a demand which might be met without much difficulty if the village were in the hands of a single owner, and no such complications existed.

Another point worth noting is that the hands of the rent courts are tied and bound by a provision of the Rent Act (XVIII of 1869), which prohibits them from taking into consideration circumstances, such as bad seasons, floods, or drought, which may have given rise to a default in payment of rent, unless a remission of revenue has been allowed by competent authority for the same cause and in the same estate. Now it rests with the Taluqdār to apply for such a remission, and as it is the direct interest of a Taluqdār to get rid of privileged cultivators and supplant them with hardworking tenants-at-will, it may often not be worth his while to apply for a remission of revenue which would put the privileged cultivators, *pro tanto*, out of his power. The sum of which he and they would thus escape the payment may, especially if the cause of default extend over only a limited area, be a trifle to him, though possibly a matter of life and death to them. Still more is it the interest of the Taluqdār to destroy and break down under-proprietary rights in subsettled villages, and to engage directly with Government for the payment of the revenue assessed on them. It would often, therefore, be worth his while to allow arrears to accumulate up to the period of limitation, and thus to sell up the under-proprietors. That this has been less frequently attempted than might have been anticipated is probably due to the impecunious condition of the Taluqdārs, to whom a sum of ready money generally is a so pressing necessity as not to leave them at liberty to consult their ultimate interest. The fact remains, however, that we have left the under-proprietors to be dealt with by men whose ultimate interest it is that they should default. Altogether, we have not left ourselves very much right to be virtuously indignant with the under-proprietor if he forms the same determination with regard to the Taluqdār and ourselves at which Goldsmith's vagabond friend arrived,

concerning his stingy master and the still more stingy housekeeper, — “As they endeavoured to starve me between them, I made a pious resolution to prevent their committing murder.”

The only agricultural class remaining to be considered is that of the Taluqdárs—if, indeed, a class may be called agricultural whose only connection with agriculture is the expenditure of the rents paid to it by agriculturists. What, then, is the condition of the two-hundred-and-fifty-six gentlemen who form the apex of the rural system in Oudh, and of the larger number of smaller landholders, who, though differing in sundry other respects, resemble the Taluqdárs in the main feature of being supported by the rents of the lands over which they exercise rights of ownership? A glance at the paper theory of their existence would lead one to imagine an opulent and flourishing body of landed proprietors, with little to do but to collect the Government revenue of which they retain a portion varying from ten to fifty per cent for their trouble; except, indeed, the altogether subsidiary functions of maintaining order on their estates, improving agriculture, and ameliorating the condition of their tenantry. In practice, however, it has been generally found that their principal function of collecting the revenue has been of so absorbing and engrossing a nature, as to leave them little leisure for the discharge of those minor duties, the performance of which, however, be it observed, is expressly stipulated in their sannads as among the conditions upon the fulfilment of which the maintenance of their status by Government is to be dependent. The fact is that very few Taluqdárs realise the full income of which they are officially supposed to be in enjoyment. Not a few are unable even to meet the Government demand out of their collections, as the Superintendents of Encumbered Estates are in a position to testify. A few, no doubt, do realise their collections in full, and do so far, at least, as opulence is concerned, fulfil the governmental theory of their existence, but a large majority occupy a position intermediate between these two extremes, and while they pay the Government demand, collect a certain sum over and above on which they themselves subsist, with more or less ease, according to the width of the margin and their personal habits of economy or extravagance. Their failure, as a rule, to collect the full amount to which they are legally entitled is due to a plurality of causes, the chief of which is not unfrequently over-assessment. Blood cannot be got out of a stone, neither can money, except in small quantities and with considerable pressure, be obtained from an impoverished and generally hostile tenantry. The natural difficulties of the situation have been aggravated by the imbecility and bad management of the Taluqdárs themselves, as well as by the rascality of their agents. The inadequacy of the existing law to enable

a decree-holder to realise the amount of his decree should also be taken into consideration. Not that its amendment, while other things remain as they are, is for a moment to be advocated. The evils of an unequal and over-heavy assessment are to some extent mitigated by the imperfection of the legal means for its realisation; and it is surely preferable that a body of men to whom we have sacrificed so much and so vainly as we have sacrificed to the Oudh Taluqdárs should benefit somewhat less by our rule in practice than they benefit in theory, than that the village brotherhoods should, as would too often be the case, be brought to absolute ruin.

It is a choice of evils, for it is an undoubted evil, though the lesser of the two, that the impotence of the law should be the security of the people. By all means let the discrepancy between the theory and practice of the law be removed; but if the attempt to remove it be made merely by improving the law of distraint while leaving the present assessment unaltered, the burthen will in many cases be simply shifted from the shoulders of the Taluqdárs, who are more able to bear it, to those of the village brotherhoods, who are less able.

But what, we must ask, is the condition of the Taluqdárs, as a body, now, compared with what it was twenty years ago? Intrinsically, probably, they have changed but little. A thin veneer of semi-civilisation somewhat obscures the rude features of the lawless freebooter under the guise of the modern landlord; but the alteration is only skin-deep. So far as tastes and inclinations are concerned, it may safely be said that, with a number of exceptions which might almost be counted on one's fingers, they have not changed at all; the only real alteration is the loss of their former vigour, resulting from its disuse, which, as it was seldom directed towards any very desirable object, is not, on the whole, to be regretted. No less liberal, less expanded, or less useful mode of existence could well be conceived than the life of squalid, tawdry, pretentious discomfort led by nineteen Taluqdárs out of twenty. Peculiarly speaking, they are probably more embarrassed now than they were before annexation; not, perhaps, more deeply in debt, but more *embarrassed*—the demands of the Government and of their creditors, being far more rigid and stringent now than in the days of the Nawâb. In justice to them it should be remembered, however, that they have been placed by us in a position demanding the exercise of intelligence and energy, both financial and administrative, not to speak of justice and moderation, qualities which they could not reasonably have been expected to possess. The fault is more ours for having put them in positions which they were, as a rule, utterly incapable of occupying, than their's for having failed

to fulfil their functions satisfactorily. Under native government they were the natural outcome of the social and political forces at work, and probably had their uses. We have changed the social and political conditions of the country by substituting contract for status, law for force, and the uses of the Taluqdárs have ceased to be. An order of imbecile Front de Bœufs can never be a very valuable element in any community, least of all in a community subject to the reign of law.

This brief review of the four classes which compose the agricultural population of Oudh has exhibited a body of depressed day-labourers ; a body of rack-rented tenants-at-will, who either are, or are rapidly becoming, cottiers ; struggling and impoverished village brotherhoods ; and lastly, an apex worthy of the foundation on which it rests, in a body of generally embarrassed and all but universally unimproving landlords.

This truly lamentable state of things appears to be due principally to over-population and scarcity of food, aggravated by serious defects in our revenue system. While these things are thus, of what use is it for a Government to devote its time and its money to anything but direct action upon the sources of the evil ? While the millions are starving, we might as well try to make a pyramid stand upon its apex, as attempt to regenerate them by ornamental legislation, or by anything but putting them beyond the ceaseless pressure of physical want.

When, however, over-population is insisted on as the main cause of the evils under which the province is literally groaning, most people will probably feel inclined to throw up their hands in despair. And, indeed, the task of relieving an over-crowded and inland country like Oudh is of the most difficult. What, it may be asked, *can* any Government do for a people whose day-labourers with a precarious income of from *fifteen to eighteen pence a week*, if paid in cash, and *four pounds a day of coarse grain* if paid in kind, habitually marry at seventeen or eighteen, and have half-a-dozen miserable, half-starved children by the time they are five-and-twenty ? To which question the answer must be that for such a class as this, so long as its habits remain unchanged, no Government can do anything. A people whose habits are so hopelessly anti-Malthusian, and among whom improvements in production are unknown, can only be kept alive, paradoxical as it may sound, by famine, slaughter, or disease. Where moral or prudential restraints on multiplication have no existence, the physical checks of starvation and disease can alone maintain the balance between the number of mouths to be filled, and the quantity of food available to fill them. Population and subsistence are always running an endless race, and the material well-being of any society depends, *ceteris paribus*, on the extent to which it can succeed in handi-

capping population. It is, of course, a physical impossibility for population actually to *outrun* subsistence ; but it may press on it so closely as to leave no margin upon which men may pause a breathing space, no interval of rest which they can devote to any higher aim than the provision for merely physical needs. The well-being of mankind is mainly dependent on the possession and good use of such a margin. To use it well is as important as to possess it, but it must be possessed before it can be used at all. How, then, if at all, is such a margin to be secured for the people of Oudh ?

It must be once more repeated, with an iteration which is only not damnable because it is so very indispensable, that it is impossible to do anything which shall permanently benefit this people so long as their tendency to multiplication exists in undiminished strength for so long any amelioration of their condition will only enable them to multiply somewhat more freely. While inability to procure a minimum of the coarsest possible food continues to be the only check to the increase of population, it will continue to be worse than useless to move the check a little further back, for the only possible result of so doing will be to increase the number of beings whose existence can hardly fail to be a curse to themselves and others. Any addition to the numerator of that miserable vulgar fraction of life which they possess must inevitably lead to a corresponding increase of its denominator, and the fraction itself will be no larger than before. Unless, then, we can alter their habits, unless we can raise the standard of living to which they are accustomed, and to habituate them to a higher standard than rather than forego it they will refrain from multiplying, we had better sit still and do nothing. If, for instance, we could make wheaten flour the habitual food of the poorest class, and accustom them to two meals a day instead of one for a sufficiently long period to make them regard these things as more indispensable to them than having a large number of children, we should do them a real benefit. But if we merely enable a larger number of persons to subsist on one meal of pulse a day, we should be doing harm rather than good.

Now, is it possible thus to alter their habits, and if so by what means? The answer is that the thing has been done before, and may be done again, by the adoption of means similar to those which have elsewhere proved successful. Let us turn again to Mr. Mill, who, while insisting more emphatically than any other recent economist upon the impossibility of permanently benefiting the poorer classes except by restraining their tendency to increase, has also asserted with greater intensity of conviction than any other writer the possibility of modifying that tendency. In that part of the second book of his *Political Economy* which deals with the remedies for low wages, he thus writes :—

"A sudden and very great improvement of the condition of the poor has always, through its effects on their habits of life, a chance of becoming permanent. What happened at the time of the French Revolution is an example.....The majority of the population being suddenly raised from misery to independence and comparative comfort, the immediate effect was that population, notwithstanding the destructive wars of the period, started forward with unexampled rapidity.....The succeeding generation, however, grew up with habits considerably altered.....In the purpose of altering the habits of the labouring people, there is needed a two-fold action, directed simultaneously upon their intelligence and their poverty. An effective national education of the children of the labouring class is the first thing needful; and, coincidently with this, a system of measures which shall, as the Revolution did in France, extinguish extreme poverty for one whole generation."

To begin with the question of education:—it cannot be denied that we have at our disposal means for influencing the minds of the children of the poorer, and, to some extent, of the very poorest classes—means of which we have hitherto made hardly any use at all. We have schools all over the country, which are attended by large numbers of children drawn from the ranks of all the agricultural classes except the highest, and it is for us to decide on the nature of the books to be studied there. Hitherto the books in use have consisted mainly of childish fables, absurd mythological stories, and the barest skeleton outlines of history and geography. Would it not be well that these school children, while learning to read, should at the same time learn something which might conceivably be of some practical use to them in life? The notion of teaching Political Economy in village schools may seem Utopian, but it would be perfectly possible to state, in half a dozen pages of moderate size, the principles of population and subsistence in a form so concrete and simple as to be readily intelligible to any child capable of understanding, not to say of applying, the four rules of arithmetic. Any child can comprehend that a field the produce of which is sufficient to support five people will not equally well support ten, even though double the amount of labour should be bestowed upon it; or that five rupees divided as wages among twenty workmen will give them four annas each, while if it is divided among forty workmen they will get but two annas a piece. That is practically, the whole theory of population and subsistence, and it is, surely, as likely to impress a boy's mind as the information that Constantinople is the capital of Turkey, and, once apprehended, indefinitely more likely to do him actual service in life than an intimate familiarity with the exploits of Shri Krishna or Hanuman.

Similarly, the enormous increase in the fertility of soil caused by irrigation might be inculcated. Such sentences as, 'Irrigated land yields twice as much as unirrigated,' 'One *pakka* well will water thirty *bighas* of land,' might alternate in copy books with, 'Men increase faster than food can be grown to feed them,' 'The more mouths to feed, the less there is for each,' and similar gems from Malthus. If the matter were seriously taken up, much more might be done to popularise sound notions on economical questions than would at first sight be supposed. An acquaintance with the outlines of the theory of population might be required from every school-master, and its constant inculcation on his pupils prescribed. The fundamental doctrines of political economy, all those which it especially concerns a labouring class to know, are as simple and obvious and concrete as they can possibly be; and if they were once absorbed into the minds of, say, even five per cent of the boys who attend our schools, they would gradually filter through the various strata of native society. The agency of the native press might also be utilised. There are, doubtless, other means by which we might economically educate the people, but these are the most obvious, and no attempt has yet been made to employ them. When they have been tried it will be time enough to find out others. Whether the results thus produced would be great or small, can only be tested by making the experiment; but, if, as seems to be demonstrable, it is only by understanding and obeying the law of population that the economical salvation of the people can be worked out by them for themselves, it is surely our duty to put them, so far as we can, in the way of gaining sound notions on the subject. We cannot at a stroke elevate the masses into models of prudence and virtue, but we can introduce an agricultural and economical catechism into our schools, and we can require vernacular newspapers to publish Government resolutions and advice. We cannot make the horse drink, but can we not at least increase the chances of his doing so by leading him to the water.

It remains to enquire by what means, if any, we may "extinguish extreme poverty for our whole generation."

For the attainment of this end, Mr. Mill proposes two measures, neither of which is directly applicable to the circumstances of Oudh—colonization on a large scale, and "the devotion of all common land hereafter brought into cultivation, to raising a class of small proprietors." Emigration from Oudh could hardly be made sufficiently extensive to have any very appreciable effect on the condition of those who remained behind. It is something, no doubt, to have such outlets of escape as Trinidad and Demerara open to those who find that they can no longer carry on the struggle for existence at home. It is a great advantage to those who go, but



the number of these will always, probably, be too small to sensibly relieve those who do not. If emigration from Oudh were ever attempted on a large scale, the best field for locating the emigrants would probably be found to be the more thinly peopled tracts of country in the Central Provinces.

As for Mr. Mill's second specific, the creation of a class of small proprietors, it may be said, perhaps, that we have these already in abundance. But *have* we? *Are* the petty cultivators of Oudh really peasant proprietors? If a peasant proprietor means a peasant who either owns the land he cultivates, or holds it at a rent fixed either by law or custom, and not abandoned to competition, then the village brotherhoods, indeed, are such proprietors; but the great mass of cultivators, the Kurmis, Muraos, Káchis, Ahírs, Chamárs and all the rest, are nothing of the kind, or are fast ceasing to be anything of the kind. So long as, and in proportion as their rents were fixed by custom, they were peasant proprietors. But, as we have seen, custom as the determining agency of rent is rapidly giving place to competition, and, as a consequence, the great mass of ordinary cultivators are rapidly sinking into the condition of cottiers, and into all the miseries which a cottier tenure involves. What is wanted to arrest this lamentable process is a measure which shall fix their rents for at least a considerable period, the term of settlement being probably the most appropriate. That fixation of rent which was formerly the result of custom, must now be brought about by law. A custom cannot be revived except by crystallizing it into a law. The only other alternative is one which is proving and still more and more will prove ruinous to the cultivators, and that is to leave their rents to be adjusted by competition. No talk about the virtues of *laissez-faire* and unrestricted freedom of contract will meet the case. As we have fixed the rent to be paid by ex-zamíndárs for their sár land, so should we fix it for all land. The cultivators stand as much, or more, in need of protection from each other's competition as any other class. The rent payable for a term of thirty years on every field in the country, according to the classification of soils, should be fixed by the settlement courts, and during the term of settlement, there should be no power of enhancement, nor, so long as the rent thus fixed is paid, of ejectment. Our settlements would then be fixed on a really reliable basis, instead of being, as at present, to a great extent, mere guess work. And, what is far more important, every cultivator would no longer be at the mercy of every other cultivator a little worse off than himself, who may undertake to pay a somewhat higher rent. The petty cultivators would, in short, be genuine peasant proprietors, instead of being what, at the present rate, they will within twenty years have become, simple cottiers. This principle of a legal fixation of rents we have followed in the case of sár-holders,

and, to some extent, in that of tenants with rights of occupancy. But we have made the mistake, in many instances, of fixing the rates too high. If the principle were universally applied, and these errors of detail corrected, Oudh tenures would, with one important exception to be noticed further on, be on a very fairly satisfactory footing.

Improvements in tenure, however, will not, directly at least, benefit the landless labourers. Their prime necessity is the possession of greater purchasing power over food, which can only be obtained for them in two ways, either by increasing their wages, or cheapening food, or both. Nearly all that we can reasonably expect to do in the former direction we do already, by largely employing labour on public works; but in the direction of cheapening food there is much that is not but might be done. What is wanted to cheapen food is to increase the facilities for producing it, and the one great facility needed, in India, is irrigation. Whether the objections which have proved fatal to the Sardah canal were conclusive or no, they cannot, at any rate, apply to irrigation from wells. So narrow are the proportions to which the system of Takávi or advances for agricultural improvements has as yet attained, that it is difficult not to under-estimate the results which might be reached by a perfectly practicable expansion of it. A masonry well may in most parts of Oudh be constructed at an expense of 200 rupees or £20, and such a well will thoroughly irrigate, at the lowest estimate, ten acres of land. Irrigation of previously unirrigated land may be said, roughly speaking, to double its produce. Thus, at an expenditure of one million sterling, to be ultimately repaid, fifty-thousand wells, irrigating and doubling the produce of five hundred thousand acres, might be constructed. Irrigation is the best possible preventive of drought and consequently of famine, and the best possible security for cheapness and plenty. If what has been done be compared with what might be done, the discrepancy is startling. In 1868-69 the amount of advances made for agricultural improvements was Rs. 1,15,867. Ever since then it has been steadily falling, and, in 1872-73 amounted to the contemptible sum of Rs. 16,523. "The reasons for this," says para. 319 of the last Administration Report, "are not far to seek; these loans are chiefly taken for the construction of irrigation wells, and the last two years having been years of excessive rain, the want of irrigation wells has not been felt by the people. And besides this, several applications for Takávi were rejected, because the land to be irrigated from the proposed well was within the area which would have been watered by the Sardah Canal had that project been carried into execution."

These reasons, however, are purely local and temporary, and cannot be held to account for the generally scanty growth of the

system. The maximum amount to which Takávi advances have ever attained in Oudh, viz., Rs. 1,15,867 in 1868-69, was but the hundred-and-eleventh part of the then land revenue of the province, £1,280,000. The land revenue at present amounts to, £1,480,000 of which the sum devoted to Takávi advances was very little more than a nine-hundredth part.

Is this such a portion of his income as an enlightened landed proprietor might be expected to devote annually to the permanent improvement of his estate? The real causes which have kindered the extension of the system are mainly the vexatious conditions imposed on the borrowers, and the cumbrous mass of returns and *nakshas* connected with it, by which any zeal that might otherwise have been felt for its propagation, on the part of district officers, has been so effectually smothered. The rules to be observed should be of the simplest and briefest possible nature, and no return should be required beyond the mere statement of the amount advanced, the name of the borrower, the purpose for which the loan is required, and a specification of the land hypothecated for its repayment. Apart from imperfections of the system itself, there are plenty of causes in the character and circumstances of the people which have prevented them from applying for loans. Short-sightedness, apathy, suspicion of the motives of Government, dread of consequences of failure, and last, but by no means least, the superior lucrativeness of *mahájuni* as an investment for spare capital, are deterring influences sufficiently stringent to necessitate considerable attractiveness on the part of any scheme which is to counteract them. So far from this, the repayment of the instalments of the advance within three years is required, that is, long before the work yields a profit equal to the instalment due; and collateral security, in addition to the hypothecation of the land to be improved, is enforced. The result of the first of these restrictions, that which requires repayment within three years, is, that the borrower has to pay  $33\frac{1}{3}$  per cent of the amount advanced per annum; while the improvement can hardly yield more than 15 per cent. He has thus to advance 55 per cent of the capital himself. He is merely enabled, as it were, to buy the well ready made from a builder who gives him three years credit and charges no interest. This inducement is not sufficiently strong. The period fixed for repayment should be regulated by the probable percentage of profits. Advances should only be made for works likely to yield at least twelve per cent on the outlay, and the term of repayment should be extended to eight years or less, according to the probability, to be estimated at the time of the advance, of the profits equalling the outlay in eight years or sooner. Secondly, a low rate of interest should be charged instead of collateral security.

A charge of two or three per cent would be gladly borne, as the borrower has to pay more than that already to the *mahájun* who gives security for him. This might allay the natural suspicion felt by a native for all free gratis action ; and it would not be novel, for, until 1855, interest on such advances was charged at the rate of *twelve* per cent per annum, under section 10 of Regulation XXXIII of 1793. The requisition of collateral security, is condemned in the " Directions to Collectors," on the ground that it " entails expense on the person it is intended to benefit, and " materially detracts from the value of the boon." A Takávi advance is legally recoverable by the same process as an arrear of land revenue, and the land hypothecated for its liquidation is amply sufficient security.

Thus, the extension of the Takávi system appears to have three main requisites—the discontinuance of all returns except the one above mentioned, the extension of the term of repayment ; and the charge of a low rate of interest instead of collateral security ; changes for the accomplishment of which nothing but a stroke of the pen is necessary, and the effect of which could hardly fail to be, in some degree, and might be in the highest degree, beneficial.

The adoption of the two measures just advocated—fixation of rents, and extension of irrigation, would probably do much to improve the condition of the ordinary tenants and labourers, and the latter, indeed, by cheapening food, would be a relief to all classes of the population. But would they, by themselves, however completely they were carried out, and however fruitful in results they might prove, be sufficient to render the agricultural system of Oudh a reasonable and satisfactory one ; to make it a system of which the main outlines could be considered conformable to rational principles ? No ; the agricultural system of Oudh can never be reasonable or satisfactory until either the Taluqdári settlement is abolished, or the character of the Taluqdárs themselves is utterly and radically altered, one might almost say, reversed.

The Taluqdári system was adopted as a *pis aller* under the stress of political exigencies ; and its adoption would have been a heavy price to pay for deliverance from those difficulties, had they been ten times as pressing as they were. It is hardly needful to attack the Taluqdári principle considered absolutely. No reasonable man, probably, will maintain that a body of unimproving landlords, whose one concern with the land is to derive the largest possible income from it, and whose expenditure is as purely unproductive as it is possible for expenditure to be, can be anything but a burthen to the country which has the misfortune to contain them ; or that, if they demoralise and oppress their tenants by rack-renting and extortion, not to speak of acts of a still darker complexion, they are

not a curse as well as a burthen. That the Taluqdárs of Oudh, with a very small number of exceptions, are such a body of landlords, no one, probably, who has any acquaintance with the province will deny. Let us turn once again to Mr. Mill. "Whenever," he writes, "in any country, the proprietor, generally speaking, ceases to be the improver, political economy has nothing to say in defence of landed property as there established. In no sound theory of private property was it ever contemplated that the proprietor of law should be merely a sinecurist quartered upon it. .... When private property in land is not expedient, it is unjust. .... The claim of the land owners to the law is altogether subordinate to the general policy of the state. The principle of property gives them no right to the law, but only a right to compensation for whatever portion of their interest in land it may be the policy of the state to deprive them of." It is needless to dwell on the radical distinction between property in land and property in other things. The theoretic basis of private property in land is that it is for the ultimate good even of those who are apparently excluded from all share in the land, and that the self-interest of the landowner will induce him to make the land under his control as productive as possible. Where this ceases to be the case, private property in land falls to the ground. And as regards the Taluqdárs of Oudh, it is certainly not the case. The Taluqdárs' self-interest, their desire of wealth, is less a productive than a *predatory* impulse. The public cannot count on the Taluqdárs' doing their best by the land, but it can count on the tenants doing so, if the latter are secure of reaping the benefit of their exertions.

The Taluqdári system, then, looked at abstractedly, is utterly indefensible. Unfortunately, however, we are precluded from looking at it in this absolute way, or rather, are under the necessity of also regarding it from a concrete or historical point of view. The system, though not of our creation, has been adopted and sanctioned by us, and cannot be put an end to by a stroke of the pen.

That the Government of India has a perfect right to abolish the system, cannot, without contravening all sound principles of jurisprudence, be denied; and the act could, in no intelligible sense, be called illegal, though, if carried out without compensation to the Taluqdárs, it would, no doubt, be unconstitutional, that is, it would be inconsistent with the principles of Government which we have hitherto observed. But the supposition that we are in any way bound to the perpetual maintenance of the system, either by the Sannads which we have granted, or by Act I of 1859, (which defines the position of Taluqdárs), is flatly opposed both to jurisprudence and common sense. The substance, in short, of what the Government might, with perfect fairness practically say to the Taluqdárs, would be something not unlike this:—The

experience of eighteen years has shown us that the fulfilment of our express contract with you two hundred and fifty six gentlemen is incompatible with the fulfilment of that tacit, but not, therefore, less binding contract with the seven or eight millions who compose the agricultural population of Oudh, which arises from the simple fact of our having undertaken the task of governing them. The compacts, as compacts, are equally binding, but if the observance of the former be found inconsistent with that of the latter, the question necessarily arises, which is the more important of the two? a question which, in our opinion, is sufficiently answered by its mere statement. We hold our duty to the great mass of the people to be almost infinitely the paramount consideration, and sorry as we are to take a step which you will no doubt consider, or at least declaim against, as a breach of faith, we are constrained to admit that we made a mistake in 1858 from the consequences of which we have been suffering ever since. You have completely disappointed the expectations we had formed of you. We have no wish, however, to indulge in useless reproaches. All that we have to say is that this state of things must cease, or we will cease. Hitherto, we have been in the position of the masters of a school, consisting of a few big boys and a great many little ones. Finding that you were both inclined to be troublesome, and that the little boys were led away by your influence to rebel, and also being very much occupied at the time with other business, we agreed to give you certain privileges and powers over the little boys, in return for which you were yourselves to submit, and undertake to keep them quiet, the little boys themselves being, as a matter of course, not consulted in the matter. We now find that these poor little children are in a state of misery and discomfort which we can only describe as frightful, and that, so long as your present position is maintained, there appears to be no reasonable prospect of relieving their condition. The conclusion then at which we are reluctantly forced to arrive is that your privileges must be materially curtailed.

Such a statement would, of course, be received by those to whom it was addressed with a prolonged and universal howl; to which, however, it would not be necessary that the Government should pay any particular attention. If there is one body of men more than another whose wrath we can, politically speaking, afford to despise, and whose dislike of any measure intended to benefit the agricultural masses should be taken as its strongest recommendation, that body consists of the Taluqdárs of Oudh.

It might indeed be argued that the Taluqdárs, having flagrantly violated the conditions of their sannads, have lost all right to compensation. The fact of the violation is undeniable. They undertook to maintain all subordinate rights. Is it not notorious

that they have almost universally tried, and too often succeeded in the attempt, to break down subordinate rights? They undertook to improve and extend agriculture. Can any one point out an improvement which they have executed, or any other assistance which they have given to agriculture? But this argument, whatever its legal merits, savours too much of sharp practice to be recommended for adoption. To this extent, however, it should carry weight, viz, that in awarding compensation for such of their rights as the Government may see fit to resume, nothing but the strictest justice, the most rigorous measure, should be allowed them, and no doubtful points should be given in their favour. Their breach of the conditions of their sannads, though it should not be held to disqualify them for compensation, would distinctly, under anything like liberality or generosity in awarding such compensation, be mere culpable weakness and a reward of iniquity. The true theoretical position of Taluqdárs under the Native Government was probably that of hereditary tax-gatherers with a percentage on their collection, whether they were originally anything more than this, or not, it is at any rate inexpedient that they should be anything more than this now. To this position they should be made to revert, and their percentage limited to a maximum of, say, one-tenth. For the difference between this amount and that to which we have allowed them to acquire a prescriptive right, they are, in equity at least, entitled to compensation. They are utterly unfit to be trusted with any powers of enhancement or ejectment. All that they can be safely permitted to do is to collect the sum authoritatively assessed on each field and to sue for the ejectment of any occupant of land who does not pay that amount. It need hardly be said that the accomplishment of such a revolution as this would be a work of exceeding difficulty and complication. It would have to provide not only for the estates of Taluqdárs, technically so called, but also for the lands which have passed out of their hands by sale or transfer, as well as for the estates of minor landlords. But the task is worthy to be reckoned with those for the successful achievement of which Germany venerates the memory of Stein and Hardenberg, and Ireland will one day bless the name of Gladstone. The regeneration of a country so impoverished, distracted, and disorganized as Oudh can under no circumstances be anything but difficult, and without the abolition of this pernicious system, seems well-nigh impossible. The country is far too poor to maintain such an excrescence in its agricultural system, as a body of unimproving landlords and though light assessments and good seasons may, for a time, prevent the burthen from being so heavily felt, yet so long as that excrescence remains it can hardly be anything but poor.

The only alternative is that the landlords should not only

improve themselves but be the cause of improvement in others, and of such a consummation what reasonable hope can be entertained? How can even the successors of the present Taluqdárs, brought up as they are, and are likely to be, be expected to acquire the qualities of foresight, self-restraint, energy, enlightenment, justice, the general diffusion of which throughout their ranks could alone save them from becoming what their fathers now are,—a burthen and a curse to the country? So remote a possibility need hardly be discussed here.

It would be presumption to attempt to enter here into the particulars of any scheme by which the enfranchisement of the land from the corrupt and corrupting influence of the Taluqdárs might be accomplished. The discussion of these could only be usefully attempted by persons of far greater experience than the writer. But this much may perhaps be said without blame, that whatever the measures adopted, whether to raise the intelligence of the people, or to improve their external condition, the real, and for the present, the ultimate end of such measures, should never be lost sight of, *viz.*, the elevation of the standard of comfort, and the extinction of extreme poverty among the poorer classes. All means for the attainment of this result should be adopted simultaneously, not successively. Otherwise, their effect will be frittered away uselessly, and more than counterbalanced by the stimulus which they will give to population. The improvement in the condition of the people must, to be of any permanent benefit, be great enough and sudden enough to improve their habits even though population should increase at its most rapid rate.

One word in explanation of the phrase used above—"for the present, the ultimate end"—may not be superfluous, lest it should be suspected to denote forgetfulness of any higher aim than "barley feeding and material ease." Nothing could be further from the writer's intention, and there are probably few firmer believers in the uses of adversity than himself. But there are degrees of suffering which not only render any moral or material growth impossible, but corrupt and degrade the sufferer. Semi-starvation is one of these. "What human virtue can be expected of the man who is holding a wolf by the ears?" All sorrow is potential force; but it can only become actual force by being assimilated with the constitution of the mind, and transmuted into intensity of soul; as heavy rain renders worthless for a time the soil on which it lies in flood, and only strengthens and fertilises it when absorbed. Suffering which cannot be thus absorbed is worse than useless as an educational agency, and if it is not pure evil, there can be no such thing as pure evil in the universe. This again, to quote *Sordello*, is that



".....dismal brake of prickly pear  
Which bristling holds Cydippe by the hair,  
James barefoot Agathon: this felled, we'll try  
The picturesque achievements by and by."

To any one who has read these pages it hardly needs to be said that they contain no attempt to advance any economical novelty, and no pretensions to any peculiar intimacy with the inner details of Indian agricultural life. But the broad facts of the question and the conclusions to be drawn from them seem sufficiently plain to justify the attempt, even without any special knowledge, to state the one and discuss the other—"keeping to that which appears to be just. For it is best to reach this object; and if thou dost fail let thy failure be in attempting this."

## ART. VIII.—THE PSYCHOLOGY OF DREAMS.\*

THE question of the origin of the imagery of dreams, often so novel in its combinations, so startling in its incongruities, so sudden in its transitions, and yet so seemingly real, has been, a source of stupid wonder, or futile speculation to the curious among mankind in all ages. Men who held not merely that the soul and the body were separate entities, but that their connection was capable of interruption and renewal during lifetime, have found no difficulty in believing that the soul during sleep actually leaves the body, to wander abroad with a freedom from physical conditions not permitted to that grosser structure. Others, convinced of the perpetual presence of things unseen at ordinary times, have regarded dreams as direct communications of the world of spirits with the human soul. Even to those who have been convinced that the dream-world, with all that it contains, is the product of mental action, the cause of the apparent objectivity of its images has seemed difficult or impossible of explanation. That a sense of the presence of an external environment has become, through habit, an inevitable adjunct of consciousness, which, if not supplied from without, the brain is compelled to create for itself; that even in waking life purely mental images are, in certain states, projected into space, and endowed with a delusive objectivity, are circumstances which seem hardly to have suggested themselves in connection with the subject.

We propose in the present article to notice in an imperfect way some of the chief points in which the action of the brain in dreams appears to us to resemble, or to differ from, that of the waking state, and to describe briefly what we believe to be the true explanation of the illusion by which externality is attributed to the purely mental imagery of which dreams consist.

Notwithstanding certain striking differences in the resulting states of consciousness, there is every reason to believe that the brain action concerned in dreams is made up for the most part of elements of the same kind as that which takes place in the waking state. In both conditions the ultimate elements of our states of consciousness are of a twofold character, the products of actual sensation and of remembered sensations and ideas. The

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\*The explanation, given in this article, of the realistic interpretation of our mental images in dreams, was suggested by the writer, some years ago, elsewhere. Long subsequently, the theory of interference

was, the writer believes, independently put forward by M. Taine to account for our not attributing objective reality to our mental images in the waking state.

difference in the character of the result arises partly from a difference in the interpretation and order of the states of consciousness concerned, and partly from a variation in the proportion which the ultimate elements, composing them, bear to one another. As regards the first point, the difference in the interpretation appears to be chiefly or solely this—that states of consciousness which, in waking life, would be recognised as acts of the memory, or products of the imagination, and referred to past sensations, or to constructive efforts of the mind, are, in dream life, regarded as the products of present sensation. As regards the second point, the proportion in which the two kinds of elements enter into our waking states of consciousness, is reversed in the dream state, actual sensations generally predominating in the former, but constituting only a small part of the materials of most of our dreams, though, it may well be, a larger part than is generally supposed.

The difference of interpretation has long been a source of perplexity to metaphysicians and philosophers; and it is probably from the difficulty of explaining it, that has arisen most of the mystery with which the vulgar in all ages have invested dreams. Yet, it probably depends upon a very obvious and simple cause, namely, the presence in the one case, and the absence in the other, of actual sensations, recognised as such. The reason why in the waking state we do not refer to the external world the mental pictures of sensible objects which we construct or recollect, and the reason why in dreams we do so refer them, are closely related to one another. The chief reason why, in the former case, we do not refer to external objects states of consciousness not immediately depending on actual sensations, is the presence of contradictory sensations, which, being produced by external objects, are, in accordance with a well-known physical law, normally more vivid. It is some confirmation of this view, that, during the waking state, the more completely we exclude the access of sensations, the more closely our mental pictures come to simulate real ones. Ordinarily no mental image, either recollective or constructive, can be referred to an external object, which, if so referred, would intercept the image of any object actually present to our senses; for two images cannot occupy the same place at the same time. The result of the interference of actual sensations is that the mental image, being generally the weaker of the two, gives way. On closing the eyes, though we are still prevented, by other sensations than those of sight, from being deceived as to the origin of purely mental images, yet such images, are capable of assuming a much nearer resemblance to reality, than when our eyes are open and we are subjected to actual sensations of sight inconsistent with them. In other words, our state of consciousness, as regards such images, approaches what would be but

state of consciousness as regards them in a dream, much more nearly when our eyes are closed than when they are open. But such images, however complex they may be in themselves, constitute but a portion of a still more complex state of consciousness, the rest of which is inconsistent with our referring them to external objects. The mere consciousness, for instance, of the fact that our eyes are closed is sufficient in itself to negative such an interpretation, since we are aware that, with our eyes closed, we should be unable to see external objects at all. Besides this, a multitude of sensations obtain access to the mind through other channels than the eye, and inform us where and under what circumstances we are. Now, during sleep, not only are our eyes closed, actually or virtually, without our knowing it, but we are also cut off, without being aware of it, from every other source of sensation capable of producing states of consciousness inconsistent with the reference to external objects, of those recollective or constructive states which have their origin within.

A much nearer approximation to the dream state is obtained when, instead of our being partially cut off from the external world by an artificial and conscious closure of any of our senses, a similar effect is brought about unintentionally and insensibly, by a withdrawal of the attention from actual sensations, and its concentration on states of consciousness of subjective origin; and the deception is the more complete in proportion as this transfer of the attention is the more unconscious, and the construction or recollection that is going on in the mind attended with the less effort.

This objective interpretation of the images recollected or constructed by the mind in dreams will appear less surprising when we remember that a similar illusion is not uncommon in the waking state, under certain conditions of mental disease or excitement. Cases, notably that of the painter, Blake, are recorded, in which persons have possessed the power of conferring such apparent objectivity, at will, on the creations of their imagination, quenching, so to speak, by the vividness of the mental images formed, the sensations that would otherwise have interfered with them.

In many cases, irritation, occurring in the course of the afferent or sensory nerves, is, no doubt, in virtue of the law which leads us to refer the affection to their extremities, the source of such illusions. But there is a multitude of cases, among them that of the painter Blake, just mentioned, which it is quite impossible to explain in this way, and in which we must obviously look to the brain itself as the source of the illusion. Of the mode in which mental images may operate to quench interfering sensations, which they must do before, as in the case of the figures called up by Blake, they can supplant the images of external objects actually present to the sight, we know nothing certain. But we venture

to suggest that the sensory nerves may not only conduct to the brain those molecular movements which constitute sensation, but also be capable of taking on such motions from images formed in the brain; and that it is conceivable that, in certain cases, the motions thus communicated from within, outward, may be so vivid as to overpower the interfering currents set up from without, inward.

The other main point of difference between the mental operations of the dreaming and the waking state lies in the order of succession of the states of consciousness which occur in either.

This is a much more complicated and difficult subject than the other. It may, in the first place, we think, be broadly laid down that, in our dreams, as in our waking moments, this order is mainly determined by association of ideas. Indeed, it is probably so determined to a much greater extent in the dreaming than in the waking condition, owing to the absence, in the former, of those sensations which in the latter tend perpetually to divert or interrupt the order of our thoughts. The laws of association, too, are, without doubt, the same in either case, the incongruity which strikes us so much in dreams being caused, partly by the fact that every complex state of consciousness, and all the component parts of every complex state, are, with rare exceptions, equally interpreted as real; and, partly, by the absence of that control over the succession of ideas which, in the waking state, is exerted by actual sensations. Another source of incongruity is probably the exclusion from participation in the phenomena of consciousness of variable portions of the brain. There is little doubt, not only that every part of the brain and spinal cord is not always equally asleep, but that there is not unfrequently a considerable variation in the extent to which different parts are affected by sleep, at different times. If, as Professor Ferrier's observations place almost beyond doubt, different portions of the record of our sensations, and different faculties, occupy different portions of the substance of the brain, the effect which this fluctuation must have upon both the composition and the order of the states of consciousness which make up our dreams, is obvious.

We have explained above our opinion of the cause of the realistic interpretation of our mental recollections and constructions in dreams.

Let us now consider its effects. It is observable that, though habits of thought founded upon long experience, are contradicted by many of the constructive states of consciousness which occur in our dreams, such is not the case with any of the necessary laws of thought. We may dream of flying through the air, though we know by experience that men cannot fly; but we never dream, and cannot conceive of dreaming, of the part being greater than the

whole ; the greater contained within the less. As, in the waking state, all that we actually see is seen as contained within certain limits of space, determined by the nature and position of surrounding objects of sight, so, in the dreaming state, all that we imagine we see, is imagined as seen within similar boundaries. There is this distinction, however, in the mutual relation of the things seen, that, while in the waking state those things alone appear to be contained within the boundaries of our vision which are actually so contained, and consequently, except in cases of optical illusion, however strangely or unexpectedly things may be placed nevertheless, all the relations between them are consistent relations in respect of both place and time ; in the dream state, on the contrary, all mental images being equally interpreted as real, nothing is left to govern their consociation, but such necessary laws of thought as that the whole is greater than its part ; the greater cannot be contained within the less, and the like.

We may have an elephant in our parlour, if the parlour is only large enough to contain it ; indeed, if, while our imaginary vision—which, let it be remembered, is interpreted as real vision—remains bounded by the walls of an imaginary parlour—which are also interpreted as real—there should, from any cause, occur to our minds the image of an elephant—which, in virtue of the general law of interpretation, already alluded to, must appear equally real with the parlour—then, either the latter, if not originally large enough to contain the elephant, must disappear and give place to something more spacious, or must expand to contain the elephant, or on the other hand, the elephant must contract to adapt itself to the room.

In the waking state, while actually situated as we have supposed ourselves to be situated in the case of dreams, we are liable at any moment to form a mental image of an elephant ; but the image, since it will not appear real, will be posited, at the will of the thinker, in some locality, either like itself purely imaginary, or at all events outside the bounds of actual vision.

It strikes us, indeed, that if the entirety of our waking states of consciousness—namely, that portion of them which is referrible to actual sensations, as well as that which is recollective or constructive, were to be taken together as equally real, the difference in ~~point~~ of congruity between the various images which would thus be consociated as actual groups, and those which are so consociated in the dream state, would be much less considerable than is ordinarily supposed.

From the instance we have given of the mental image of an elephant, no matter how called up, compelling either the complete destruction or the modification, of the previous image of a room, it will be easily seen to how great an extent the abrupt and extra-

ordinary transitions of place, time, and circumstance, which characterize the dream state, may be explained by the exigencies of the law of interpretation above described. The external world of dream life is, in fact, entirely determined by the laws of association of ideas, instead of itself profoundly modifying their operation, as in waking life. It is, as if we were liable, not only to be at once transported to every place we thought of, but to have our entire surroundings modified more or less from time to time, in every part, to suit the least change occurring in any part, of them.

This necessity of referring to external objects, every image of a sensible object which occurs to the mind of the sleeper, fully accounts for the frequency and persistency with which we dream of the dead. It is an exceedingly difficult matter to think of a person with whose features one is familiar, without calling up the image of those features in the mind, and the fact of the person thought of being dead, in no degree diminishes the difficulty. But in dream life, to call up the image of a person is actually to see him; and, consequently, in dreams we seldom think of people whether dead or alive, without seeing them, or, in other words, we generally dream of seeing rather than of thinking of them.

If this theory of the cause of the apparent reality of the world of dreams be correct, it would seem to follow that, though we may dream of thinking, we cannot dream of imagining sensible objects, for such objects, being necessarily referred to the senses for their origin, would appear real, and become part and parcel of the general deception. We might, of course, dream of seeing a picture of a friend, but we could not dream of imagining the form of a friend. Our own experience of dream life confirms this. Though we have certainly dreamt of thinking, we do not remember ever to have dreamt of forming a mental picture of any sensible object.

Dream life, like waking life, has its past and its future, as well as its present, but its past and future differ from those of waking life in the absence of the picture forming faculty. In our dreams we recognise scenes and objects as having been previously perceived by the senses, but we never call up pictures of such scenes and objects independently, as by an act of memory, for whenever we call them up, we appear to see them again. From the fact that the memory of dream life is chiefly confined to recognition, it follows that we rarely dream of remembering at all in any other sense. That deliberate dwelling upon past scenes, which forms so large a part of the pleasure of imagination in real life is simply an impossibility in sleep.

The past of dream life, such as it is, is made up partly of the actual past of waking life and partly of a past of its own. These two pasts, however, are not at the time discriminated, for though we may recollect the actual past of our waking life in dreams, we

recollect it not as such, but as part of that dream life which alone appears real.

We have, in short, at that time no consciousness of any distinction between a real life and a dream life, except on rare occasions, when that series of more or less rapid physical changes which constitute the act of waking, has already set in, and, with one foot in the actual world and one foot in dream land, we become aware of the unreality of the latter. Often, in such cases, after going through some scene of terror, of the unreality of which we have had no suspicion, the conviction that it is but a dream suddenly flashes upon us; and nine times out of ten, before the consolation we derive from the discovery has had its full effect, we wake, feeling not seldom that it is by an effort of the will that we shake off the vision which has oppressed us.

We have remarked above that the proportion in which actual sensation and imagination, respectively, contribute to our waking states of consciousness, is reversed in dreams, actual sensation being to a great extent excluded from the latter, while it always commingles with, and often forms the predominant element in, the former. In what proportions, it may be asked, do the different classes of remembered sensations contribute to the imaginative element of which our dreams are mainly composed? We believe it will be generally agreed that the dream world consists for the most part of sights and sounds and of the former to a much greater extent than the latter; that we dream of tasting comparatively seldom—much more rarely, indeed, than of eating—and then but faintly; while we dream of smelling still less frequently, and more faintly. In other words, the remembered sensations chiefly concerned in dream consciousness, are sensations of sight and hearing, while those of taste and smell form but a comparatively unimportant element of the whole.

Though occasionally present to a painful degree, the sense of feeling is generally absent from our dreams. We move for the most part without being conscious of the resistance of the air, without even the sense of muscular motion; walk without feeling the ground; hold things without the sense of contact or of weight.

And this is precisely what we should expect from the comparative definiteness with which we are able to reproduce these different classes of sensation in our waking memory. The sensations which we remember most vividly, definitely, and easily, are those of sight and sound. To reproduce in imagination even the ghost of a taste, or a smell, or a sensation of touch, pleasant or painful, requires great effort; to imagine such sensations with any thing approaching the vividness of reality, is probably impossible with most men.



Then, again, as regards remembered sensations of sight and sound, just as it is much easier to picture vividly form than colour,\* and articulate, or musical, sounds than inarticulate sounds, or mere noises; so the forms of our dreams are much more vivid than the colours, while the sounds we hear are principally, though by no means exclusively, articulate language or music.

The general atmosphere of the dream-world is one of comparative silence and gloom, or at least very subdued light, and the colours are, for the most part, what would be seen in such a light, neutral tints prevailing, and the brighter hues being comparatively rare. There is, however, one notable exception to this in the case of fire, and we think it questionable whether, when this is represented, the optic nerves are not concerned.

We have said that the sense of feeling is sometimes painfully vivid in our dreams, and, we believe, that when this is the case it will be found that its source is in the nerves, or in actual sensation,—actual sensation transmitted, and it may be exaggerated, under circumstances to which we shall advert further on.

One of the most singular features of dreaming is generally considered to be the illusion which leads us to put our own words into the mouths of others. This, however, is less singular than the fact that we apportion what are all equally our own words between ourselves and others. The explanation would seem to be this. The law of interpretation, already described, compels us to cognise every remembered sound that occurs to us as an objective reality. Now if it is merely as sounds that words occur to our memory, there is no reason why we should refer them to ourselves, rather than to others, as their source. On the contrary, since experience shows us that our spoken words are accompanied by certain sensations of muscular motions of the organs of speech, the absence of such muscular motions from the remembered sensation furnishes a sufficient reason why we should refer the words spoken to others rather than ourselves.

But there are two modes of imagining spoken words in waking life,—as mere sounds, or as sounds accompanied by the motions of the vocal organs appropriate to their utterance. Any one who chooses may read or talk to himself in either way. Now, we believe that whether we refer the words we remember in the dream-state to others or to ourselves, depends entirely on whether we remember them in the one or the other of these two ways. If, along with the memory of words, there occurs to us that of the motions of the vocal organs appropriate to them, then we refer them to

\* The vividly coloured images and indefinite patches formed when the eyes are tightly closed after exposure

to strong light, are not products of the imagination at all but have their origin in the optic nerves.

ourselves, that is, we dream of speaking them. If, on the other hand, the words occur to our memory as mere sounds, then we refer them to others, that is, we dream of hearing them spoken.

Most dreamers must have remarked the important place which old memories occupy among the materials of their dreams. Scenes, persons and events which are seldom remembered, or have entirely ceased to be remembered, in our waking moments, continually recur to us in the dream-state, sometimes in a more or less distorted form, sometimes with life-like reality, to an extent which perplexes, and sometimes pains us. Experiences similar to that recorded by Charles Lamb in one of his *Essays of Elia*, must be familiar to all to whom the school master was once a terror. Again and again, after a lapse of nearly a quarter of a century, we ourselves go to sleep to find ourselves in the pulpit of a public school, covered with confusion at our inability to find the prayer which we are expected to read for the spiritual comfort of the assembled scholars, or in the class, hopelessly confounded by some passage of Demosthenes, which we can neither read nor construe. We have already referred to the frequent intercourse with the dead, sometimes the almost forgotten dead, which characterises our dreams.

Yet we might expect that the freshest memories would be the most likely to occur to us, or be re-called by association in our dreams.

The fact is, that there are contrary influences at work to determine the region of memory that the consciousness shall occupy in the dream-state. On the one hand the actual habit of the mind tends to keep it among the memories with which it has been most recently occupied in its waking state; on the other hand it is the part of the brain occupied by these recent memories, which, having been most lately at work, is most fatigued, and therefore most amenable to the influence of sleep. The latter cause generally prevails. When sleep is partial, as it always is when we dream, it usually invades those parts of the brain that have been most recently exercised, in preference to those which, having been longer at rest, stand less in need of it; and, relieved of the pressure of the more recent and vivid memories, those of older date that still retain any vitality, become free to assert themselves. When the brain, as sometimes happens, is much occupied with very recent memories, it will generally be observed that *over-fatigue* is the cause, which, unlike a moderate degree of fatigue, incapacitates the part of the brain concerned for sleep.

∴ The elements of which the mental states of dream life are made up, are, as we have already pointed out, like those of our waking consciousness, of a two-fold character, the products of actual sensation on the one hand, and, on the other, those of remembered,

sensations and ideas ; but the proportion in which these two elements enter into our waking states of consciousness, is reversed in the dream-state, actual sensations forming but a comparatively small portion of the materials of our dreams.

Although, from the fact of the phenomena of reflex action exhibiting themselves in sleep, we are justified in inferring that in that state neither the organs of sensation are incapable of receiving, nor the afferent nerves of conducting, even ordinary external impressions, yet there can be no doubt that such impressions either do not generally reach the brain itself in sleep, or find no response there. When external expressions do penetrate to the brain, and, as is sometimes the case, succeed in stimulating it to consciousness, either they are abnormally vivid or sudden, or they are confined to some limited portion of the nervous system which is not at the time participating in the general insensibility ; or, it may be, the general insensibility, and consequently the sleep is itself of a very imperfect character.

In waking life, on the other hand, most of our states of consciousness are largely made up of actual sensations, and from none is it possible, even by a voluntary effort, entirely to exclude them. Even when the mind is most abstracted from the sensible world around it, and directed inward upon the operations of the imagination, external impressions still continue to exercise more or less effect upon the consciousness, and even to modify the succession of ideas.

But not only is the proportion in which these two elements the real and the imaginary, enter into our mental states reversed in dreams, the former of these elements is commonly so transmuted that the effect produced differs more or less widely from what would have been produced in the waking state. The prick of a pin becomes the stab of a sword ; in the blowing of the morning breeze upon one's curtains, one hears the roaring of a tremendous storm ; the crash of falling cities is nothing but the opening of one's door ; or the ticking of the watch beneath one's pillow is converted into the clang of the blacksmith's hammer.

Familiar instances without number might be cited from works on dreams, to illustrate this transmutation of sensations. One example of the phenomenon we shall refer to, which is familiar to our own experience, and probably to that of many of our readers. We not unfrequently dream that we are at sea ; a storm arises ; the vessel we are in, rolls and pitches in a manner which in waking life could have but one result ; that result is already an accomplished fact ; we feel dreadfully seasick. Now, whenever we have this dream, we wake to find ourselves actually suffering from nausea ; and as it seems very improbable that the imagination o

certain motions should produce this condition, we have little doubt that it is really the nausea which is the cause of the dream, and not the dream the cause of the nausea. \*

- Now, we believe that this so-called transmutation of sensations is purely the consequence of erroneous interpretation. The belief in causation is one of those necessary laws of mind (whether the result of experience or not, is beyond our present purpose) which, as we have already observed, operate in dreams as well as in the waking state. When, in our waking state, we become conscious of a sensation,\* we have generally the aid of other sensations to assist us in referring it either to its true cause, or to some circumstances which actually exist at the time, and which we believe to be its true cause. When, on the other hand, the sleeper becomes conscious of a sensation, he is compelled, as much as if he were awake, to refer it to some cause ; but, being cut off from all other sensations, by which he might form a reasonable judgment of its true cause, he has to seek for its interpretation within. The interpretation he puts on it comes, therefore, to be determined by mere association of ideas. The idea of the motion of a ship, for instance, is associated in our mind with a particular feeling of sickness ; and when such a feeling occurs—isolated from all other sensations capable of explaining its origin—it naturally calls up that idea, and, being called up, the idea, by the law of objective interpretation already enunciated, necessarily appears real.

So every isolated fact of sensation which reaches the brain of the sleeper, becomes connected by the law of association with some circumstance, or set of circumstances, which his past experience teaches him to be capable of producing such a sensation.

- As may be inferred from the examples we have given, and as most of our readers will know from their own experience, the interpretation is generally more or less exaggerated. What, it may be asked, is the cause of this exaggerative tendency ? Why is it that we attribute to the stab of a sword what is really the result of a prick of a pin ; to the clang of a hammer what is only the ticking of a watch ? Probably, the answer lies in the fact that, while in the waking state, the sensation caused by the prick of a pin or the ticking of a watch, would not only be accompanied by other sensations calculated to correct an exaggerated estimate of the effect produced, but enter into comparison with other facts of actual sensation, in the sleeping state, on the other hand, besides being isolated from everything capable of correcting our estimate of the effect produced, it can enter into comparison with only remembered sensations. Now, the memory of a sensation, however vivid it may be, is in most cases infinitesimally weak in comparison with the original ; and it need hardly, we think, create surprise that when the prick of a pin is conveyed, with the superior force of actual sensation to the brain,

of the sleeper, there to take its place, not side by side with other sensations, but among the attenuated images of past sensations, of which the dream world consists, it obtains a much higher rank in point of volume, or intensity, than it would among the facts of waking consciousness.

If it is not always the case, that this transmutation of actual sensations by the mind of the sleeper is attended by such exaggeration of either their volume or their intensity, this probably arises from the circumstance that the sensations are not conveyed in their full force to the brain. The residue which reaches the brain is probably always exaggerated.

It no doubt favours this transmutation of sensation in dreams, that in proportion as we lose our waking consciousness, all sensation tends to become more or less diffusive. The degree in which we are capable of identifying the precise seat of a sensation, during our waking moments, varies, as is well known, for different parts of the body; but this power is greatly diminished for all parts of the body even when we are half asleep, and, probably disappears almost entirely when we are wholly so. Our condition in this respect then becomes, in fact, very much that of the infant before it has acquired, from experience, the power of differentiating and localising the sensations conveyed from different parts of its body; when it feels, without knowing what part of it feels. Thus all sensation comes to the dreamer more or less as a possession which he is at liberty to appropriate indifferently to any part of him, according to the requirements of his dream.

A great deal is said of the extreme rapidity of brain action in dreams; and some very wonderful stories are told in illustration of it. For instance, there is the story of the prisoner in the Bastille who, in the interval of a few seconds between the opening of the gate to admit a fresh batch of sentences and its closing behind them, slept and dreamed that a vast cavalcade defiled past him in slow procession. Similar stories might be brought forward by the dozen. In a single night events seem to take place which would occupy years in real life; the events of a day to be crowded into a few short minutes.

Yet, we doubt, whether this rapidity is not rather apparent than real. It is popularly believed that thought is much quicker than action; and, so far as this is true, the action of dreams may, doubtless, be more rapid than real action. Yet, paradoxical as it may at first sight seem, we are inclined to doubt whether thought is much, if at all, more rapid than the action it represents, except in so far as the representation is partial and imperfect. We are inclined to think that it must necessarily take as long—and would in practice generally take much longer—to go through an action, or an experience, in memory or imagination, in all its stages, and

details, without any leaps or omissions, as to perform, or to suffer it.

Whether it can be justly said that thought is quicker than action, depends, in fact, entirely on the sense in which the words are used. If it be meant that the commencement and end of an action, together with so much of the intermediate details as may be sufficient to give coherence to the representation, or even to produce a delusive sense of completeness, can be compressed in thought into a shorter time than the entire action would occupy in reality, then, doubtless, there is much truth in the assertion.

If, on the other hand, it be intended that the entire action in all its detail can be represented in thought in a shorter time than it would occupy in reality, then we do not hesitate to say that we not only have not, and probably, from the nature of things, cannot have, any proof of the truth of the assertion, but we have every reason for questioning it.

To give an instance: One may think of a journey from Richmond to Charing Cross by recollecting a more or less vivid picture of the Star and Garter, along, it may be, with one or two of the more prominent circumstances of his departure therefrom, and another more or less vivid picture of Charing Cross with some of the circumstances of his arrival there; or these two terminal points of the action may be linked together by a series of more or less typical pictures of the scenery passed on the way, which, again, may be interspersed, here and there, with memories of certain special facts of sensation, or thought, which occurred during the journey.

No doubt all this can be thought through in a very small fraction of the time occupied by the real journey; but it can be so thought through only because, in reality, it represents but a very small fraction of that journey.

To represent the entire journey in all its detail, would be to recollect everything that had been seen, or heard, or felt, or smelt, or tasted, besides everything that had been thought, during the period occupied in its performance, a task which would be practically impossible, and to perform which, if possible, with any approach to completeness, would occupy far more time than the real journey.

• We believe, in fact, that thought can never be quicker than the action which it really and fully represents, and that, wherever the action to be represented is of a varied or complex character, it will generally be much slower; though it may be more rapid than the action it is erroneously accepted as representing; in any degree, in proportion to the extent to which the details of the action are omitted in the representation. Further, we think it very doubtful whether any action, however short and

simple, is ever accurately represented in thought. The nearest approach to perfect representation is where, as in the case of recollecting spoken words, the action itself is virtually repeated. Now if any one will read to himself, taking the trouble to be sure, that he really represents in thought the sound of every word he reads, he will find that the action takes as long, or very nearly so, as to read the same words aloud would take.

We are inclined to think, then, that the rapidity of thought in dreams is confined to rapidity of transition from one stage of the action to another, and from one scene, or set of circumstances, to another; and that the actual amount of brain-action gone through in a given period of time is not much greater than that gone through in the same time in a state of reverie, when the succession of ideas is protected in the highest degree from interruption from without. No doubt, the estimate formed by the mind of the duration of the action is often much greater than the period actually occupied. But we must be careful to discriminate between the amount of brainwork really performed, and this estimate of the length of time involved in its performance. For a correct judgment of duration, we are almost entirely dependent upon the means at our command of measuring it by physical motions of known or ascertainable periods; and in the case of dreams, as under the influence of Indian hemp and in many other cases, this judgment is liable to be perverted by an erroneous impression of the completeness of trains of imagined action, which are really very incomplete.

There are many important points connected with our subject which we have not space, in this brief essay, to discuss. We have, for instance, omitted all consideration of the condition of the feelings in dreams, a condition which presents several peculiarities well worth examination. In connection with this part of the subject there is the question how it happens that, while we are liable to be influenced in a very intense degree by the sense of fear, of shame, of grief, and, in a less intense degree, by that of joy, the sense of surprise is almost entirely absent. We might have considered the perplexing question of the explanation of that curiosity of dreaming, the dream within a dream. The perverted sense of identity which is frequently characteristic of the state, would alone furnish subject matter for an entire volume of anecdote and enquiry. Then there is the curious and scarcely recognised question of the effect of dreams on our waking life; not merely of the transient effect of recent dreams on our spirits and feelings after waking, but of the extent to which more or less indefinite dream memories become unconsciously commingled with our memories of real past experiences, and are thus liable to affect our judgment.

Some of our readers may perhaps be disappointed that we have said nothing of the numerous cases in which, dreams are alleged to have been fulfilled, *i.e.*, in which the dreamer is supposed to have been endowed with a power of prevision, or of supersensual vision ; and, possibly the little we should have had to say on the subject might have disappointed believers in the supernatural. These and other points may perhaps form the subject of some future article.

In conclusion, we would disclaim all pretension to dogmatic assertion on a subject on which the evidence is so imperfect, and for his knowledge of which one is necessarily dependent in so great a degree on introspection, and so peculiarly liable to subjective deceptions. The phenomena of our dreams are the expressions in consciousness of physical facts, and any laws which correctly explain them must represent the laws of those facts. Physical science, however, has not yet furnished adequate means of testing the one by the other.

JAMES W. FURRELL.



## ART. IX.—AUCTION SALES IN THE BENARES PROVINCE.

1. *Historical and Statistical Memoir of the Ghazee-pore District*, by Wilton Oldham, B.C.S., LL.D., Part 1. 1870.
2. *Tenant Right and Auction Sales in Ghazee-pore and the Benares Province*, by Wilton Oldham, LL.D.

“THE more one comes to consider the subject of land tenures in the Benares Province, and to see what has been done in various cases the more he is struck with the greatest differences of opinion that have prevailed from a very early period. In the settlement of exactly similar cases different principles have been acted upon. The discussions that have from time to time taken place (see what led to Mr. Secretary Prinsep’s letter, and again to the one of Mr. Commissioner Bird another of Mr. Commissioner Boulderson’s of the 18th May 1833; and I dare say more would come to light if I had but a clue to lead me to them) all show in what different lights different men have seen the subject, and on the whole, I think, as a general rule, that in all cases whether of zemindaree or moostajecree in which a jumna was fixed in 1197, and in which occasion may exist for a re-settlement, that jumna, provided the proprietors agree to pay it and it does not appear to exceed what the mehal can easily bear, ought to be stuck to on the score of expediency. The people are attached to the settlement of 1197, and to the jummas fixed then, and I do not see any great harm that will result by humouring them and letting them have what they want.”

The above was the opinion expressed by Mr. Commissioner Morrieson, thirty years ago, on the important question whether imperial faith is broken by increasing the land revenue from the Benares Province beyond the amount fixed 70 years ago. It will perhaps strike the reader that Mr. Morrieson did not support his opinion with arguments of any great weight or express it with adequate dignity, but I have placed it at the commencement of this paper as an excellent illustration of the fatal case with which a benevolent writer, professing to discuss a problem of some difficulty, may overlook matters of fact the consideration of which, however distressing they may be to him personally, are essential to a sound judgment on the whole question. “The zemindars like low rates, and there cannot be great harm in humouring them.” The dissection of this argument would be amusing enough, but unprofitable, and in the present case I have quoted it simply as illustrating how the intrusion of a strong personal bias may weaken opinions otherwise worthy and as being therefore an apt introduction to Dr. Oldham’s work.

Dr. Oldham in his recent publication on "Tenant Right and Auction Sales" has, (with the help of selections from Mr. Shakspeare's *Selections from the Duncan Records*,) developed certain opinions on these subjects which he rather broadly hinted at three years before in his valuable "Memoir on the Ghazee-pore district," but in the later work he extends the application of his remarks to "the Benares Division." Whether he does this in the dispassionate tone demanded by the subject I would hesitate to affirm or deny, for, as Mr. Commissioner Morrieson has sagaciously observed, opinions differ, but to allow that Dr. Oldham goes upon firm ground in his statements would be to insult the majesty of fact.

Dr. Oldham, then, urges repeatedly in his Note on Tenant Right these three points—the frequency, the illegality, and the cruelty of sales of hereditary estates for the recovery of arrears of land revenue in the Benares Province between 1797 and 1835, alternating the duller periods in which he quotes from *Records of the 'Selections'* with paragraphs of very original declamation, and illustrating the whole with the narratives of cases of peculiar atrocity. To take these points in the order of prominence accorded to them, the first on which I would venture to make any observation is the *frequency* of sales of hereditary estates for arrears of land revenue in the Benares Province—premising that I believe Dr. Oldham to be about 95 per cent above the mark in the calculations from which he makes his startling deductions. Unsupported this premiss would be as presumptuous as it is serious, but all the information that I have been able to collect from the *Records of Benares* (the *Records* upon which I believe Dr. Oldham mainly relies for his facts) go to support it, and in the aggregate form a prop of very substantial strength.

In the following paragraph Dr. Oldham pithily presents his case:—"The chief part of the Collector's time was occupied in conducting sales or in other business connected with or arising from auction sale. On the 26th October 1811, Mr. W. O. Salmon, Collector of Benares, wrote that he had, 'for many successive days, been employed in the conduct of sales,' and after the establishment of the Ghazee-pore Collectorate in 1817 A.D. in a single month, the Collector proposed for sale one more than a thousand estates."

But in both the above there is strong internal evidence that Dr. Oldham has made the error of confusing *proposals* for sale with the actual *sale*, and the sale with the *confirmation* of sale. How serious such an error is, may be gauged from the fact that, as a rule, 66 per cent of the estates proposed for sale never came to the hammer, and of those that did, 98 per cent never changed owners,

the sales being cancelled on the subsequent liquidation of arrears. It must, therefore, be borne in mind that "sale confirmed" and "sold" have meanings as distinct as "sales proposed" and "sold," and that about seven-tenths of the estates *proposed* for sale were never sold, and that more than nine-tenths of those *sold* were never confirmed. (To take notice of the additional fact that sales *confirmed* were sometimes upset on appeal would complicate a simple statement, but the fact is a solid one none the less.)

For instance, during the Fuslee year 1226 (1818-19), there were three thousand proposals for the sale of land, yet the Collector writes to the Board of Commissioners on November 5th, 1819, "I have to communicate to you the entire realization of the arrears for 1226 F., *without having sold a single estate.*" And again, "*the balances of the estates proposed for sale on August 29th, 1816, were Rs. 1,30,000, and yet the whole of this sum being paid up not a single Zemindar's estate was sold on that day.*"

Again, the lands "proposed for sale" in the year 1812-13 aggregated a jumma of over 27½ lakhs of Rupees; in 1813-14 nearly 21 lakhs, and in 1814-15 nearly 29 lakhs. But the jumma of the lands *sold* for these years was respectively, 1½ lakh, Rs. 74,000 and Rs. 96,000. What proportion the jumma of the lands *confirmed in sale* bore to these reduced figures I cannot discover, but that it was in every case under Rs. 10,000 may be accepted as certain from the facts that in 1830-31, when the jumma of lands "sold" was 2½ lakhs, that of the lands "confirmed in sale" was only Rs. 3,600; and again in 1831-32, when the former was 4 lakhs, the latter was only Rs. 6,700!

From a statement of Tulubana realized in 1831-32 from defaulting landholders, it appears that in August, September, October, 1831—for three days sales—269 advertisements of sale were issued. In January 1832, there were (for one day's sale), 127 advertisements of sale issued. Yet from the following table it will be seen that in 1831-32 there were only seven sales confirmed so that (supposing the above proportion of advertisements to have been maintained throughout the year) not one estate of 150 proposed for sale ever changed owners. Again, in 1828-29, the jumma of the estates *sold* aggregated Rs. 1,69,000, but not a single beegah of land was *confirmed in sale*.

Year.	Number of Estates sold.	Jumma of ditto.	Number of Estates confirmed in sale.	Jumma of ditto.
1826-27	144	Rs. 1,14,000	3	Rs. 2,800
'27-28	247	" 2,14,000	11	" 9,900
'28-29	203	" 1,59,000	9	" 0
'29-30	172	" 17,000	7	" 1,241
'30-31	264	" 2,30,000	7	" 3,600
'31-32	462	" 3,89,900	10	" 6,765

By themselves, these facts might be considered sufficient to prove that if Dr. Oldham in his strictures regarding "the indiscriminate and universal employment of auction sales" in the Benares Province intends the word "*sale*" to mean the veritable mutation of ownership by purchase he is very gravely in error. But Napoleon's theory of war holds good on the field of contested argument. To assail Dr. Oldham's statement as to the *frequency* of land sales is to attack him in his strongest point, and the tactics of Austerlitz may therefore be followed even at the risk of becoming tedious.

Among the Benares Records there is filed a list of "Estates in the district of Benares sold to liquidate arrears of revenue from the Permanent Settlement of 1793 A.D. to the year 1225 F."—but it does not include (probably because Ghazee-pore being then, in 1819, a separate Collectorship, the returns for that district were submitted separately by the Collector of Ghazee-pore) the sales in the Ghazee-pore district to which Dr. Oldham mainly refers. But if we may judge from the alienations of landed property in the Benares *cum*-Mirzapore district (given in the above list), Ghazee-pore must have been exceptionally unfortunate in its revenue officers since its separation from Benares, if Dr. Oldham's calculations are correct, for in the Benares-*cum*-Mirzapore district there were between 1793 and 1818—twenty-six years—exactly 100 estates sold to liquidate arrears of revenue. This is rather less than four sales per annum.

- Again, a loose sheet of manuscript without date contains a "statement of alienations of estates for balances of revenue" in the Benares district from 1251 F. to 1261 F. (1843-44—1853-54) in which—for ten years—the total of sales is 27 or less than three per annum—or taking these 36 years together we have 127 sales, or only three and a half a year.

• These with the table given above are the only specific statements of *lands confirmed in sale* I have been able to find in the

Benares Records, but as the period they cover--36 years--is very considerable, I do not hesitate to conclude upon their evidence that three and half per annum was the average number of public land sales for arrears of revenue per district between 1793 and 1853.

The following statement of lands "ordered to be put up for sale" records the number of estates knocked down to the highest bidders, but does not record the number of sales subsequently cancelled, *which was, as a rule, about 95 per cent.*

Number of Lots ordered for sale.	Balance due from defaulting proprietors.		Jumma.		Gross amount of the sale.	Dates.	
	Of lands ordered for sale but not sold.	Of lands actually sold.	Of lands ordered for sale but not sold.	Of lands actually sold.		May	April
1680	5 40,518	58,184	1,416,057	84,149	133,774	1811	1812
1700	5 53,889	29 889	1,311,111	51,911	105,315	1812	1813
1150	4,35,330	17,359	1,360,735	31,111	47,172	1813	1814
Rs.	15,29 937	1,05,432	4,087,904	1,70,171	2,86,291		

During the above three years the Collectorate of 'Benares' included the present Ghazeepore, Mirzapore, and Jounpore districts.

The following statement of lands "put up for sale for arrears of revenue in the Collectorship of Benares" during the Fuslee years 1226, 1227 and 1228, is even more striking as it shows that *for every 264 estates advertised to be sold only one was ever sold* :—

Years.	The aggregate number of mehals actually sold.			The aggregate number and jumma of mehals advertised for sale, but which were not sold in consequence of the balance having been paid.	
	Number of mehals actually sold.	Sudder jumma.	Amount purchase.	Number of mehals.	Sudder jumma.
For 1226 Fs.	4	2,932	8,746	1,035	514,244
1227 "	12	11,178	55,746	1,794	1,165,371
1228 "	1	764	3,700	1,676	1,235,467

The following (the only) fragment preserved of a volume for 1239 F., shows that in that year 1,227 mehals were proposed for sale, of which 775 were redeemed before and 452 *after* the actual sale

Mehals sold the sales of which have not yet been confirmed.			Mehals sold the sales of which have been cancelled.			Mehals advertised, but not sold from payment of arrears.	
Number of mehals sold either in whole or in part.	Sudder jumma.	Amount Purchase.	Number of mehals sold either in whole or in part.	Sudder jumma.	Amount purchase.	Number of mehals sold either in whole or in part.	Sudder jumma.
...	...	...	452	383,139-12-15	8,61,425	776	660,784-10-123

As I have elsewhere stated that ten sales were confirmed in 1239 F., *we find that in 1239 F. only 33 per cent. of the estates advertised for sale were actually sold, and that of the estates sold only 2 per cent. were confirmed in sale.*

The following statement of lands annually "put up to sale by the Collector of Benares" between 1821 and 1831 is compiled from the "Annual Statements" entered in the volumes of *jumma-wasil-baukee* for those years :—

The aggregate number of mehals actually sold					The aggregate number and jumma of mehals advertised for sale, but which were not sold in consequence of the balances having been paid.		Mehals sold, of which the sales were cancelled subsequently.	
Year.	Number of lands actually sold (or portions).	Sudder jumma. Rs.	Amount purchase-money. Rs.	Arrear for which sold.	Number of mehals	Sudder jumma. Rs.	Number of mehals	Sudder jumma. Rs.
1229	3	1,608	10,950	....	1,193	882,637		
1230	9	5,339	28,501	....	1,681	1,280,382		
1231	1	1,432	5,000	....	1,617	1,211,119		
1232	7	5,747	3,785	....	1,149	947,588		
1233	5	1,782	30,775	....	1,569	116,857		
1234	5	5,220	42,694	2,191	1,437	1,019,111	141	111,906
1235	9	9,910	17,330	5,791	1,545	1,070,663	236	204,765
1236	0	....	....	....	1,190	1,037,664	203	169,700
1237	3	1,241	10,625	1,207	1,836	1,326,806	165	15,852
1238	7	3,676	20,305	2,401	1,031	943,782	193	64,454

That is to say, nearly *sixteen hundred* estates, aggregating an annual jumma of over 30 lakhs of Rupees, were advertised for sale *yearly*. Of these, about 1,400 were redeemed each year before the day of sale, and about 195 after the sale had been made, leaving about four estates per annum to be *confirmed in sale*. Nor were even these four always "ancestral" property.

To sum up, I would quote a surmise of the Court of Directors when puzzled by some of these extraordinary figures: "*The advertisement of lands for sale is, it appears, a species of coercion which very generally produces the payment of arrears without the necessity of proceeding to the ultimate remedy.*"

Mr. Jonathan Duncan's provision for the sale of lands in those cases "in which it may be deemed advisable" proved, therefore, exactly what he had hoped, "*useful to awe the general body of the renters into a regular discharge of the revenue,*" but, even more admirable than the sagacity which thus left with the revenue authorities a last resource in desperate cases was the extraordinary indulgence shown to hereditary zemindars by Mr. Duncan's successors. The figures I have given above prove the infrequency of sales of land for arrears of revenue, but it is unfortunately impossible to reflect in tabular statements the constant, the uncalled for, sympathy extended to many thousands of undeserving men or by a collection of dry facts to convey to the reader an idea of the lofty, statesman-like language in which the Government of the past enjoined on its revenue officers "*tenderness to the landholder.*"

Next, in Dr. Oldham's warrant comes the charge of constant *illegality* and *cruelty* in selling hereditary estates for arrears of land revenue in the Benares Province. I cannot understand how this charge is to be maintained.

In 1789, Mr. Jonathan Duncan, when issuing his leases to landholders, entered in each counterpart of lease that "*whatever balance may be incurred in the amount of the proprietor's engagements shall be recovered by the sequestration and sale of the proprietor's property, including the land of his zemindaree or share whenever Government shall order the same to be put up to auction sale,*" so that as a matter of fact, every individual entering into an agreement to pay revenue to Government, entered into it with his eyes wide open to the consequences of default. He was explicitly warned that if he failed to pay his revenue; his lands would be sold, and after this single fact is recorded, I consider that Dr. Oldham's charge of illegality falls clumsily to the ground. It does not matter one iota what Mr. Duncan's private opinion was about the law, and even if he had ever 'protested,' as Dr. Oldham states he did, against the clause inserted in the leases, his assertion of opinion cannot, and does not, influence the question of *legality*. Dr. Oldham, however, thinks differently and gives, with

marks of quotations, the following paragraph as Mr. Duncan's 'intention' under the impression, apparently, that what Mr. Duncan intended was something else than what he said :—"The collection of revenue by the system of *tulubana* is liable to abuse, but admitting of further regulation and preferable to the expedient resorted to in Bengal and Behar of selling the lands of defaulters for recovery of balances which would cause open resistance and rebellion, notwithstanding the clause, to that effect, in the *cabooleuts* of the *putteedars*, which is considered useful to awe the general body of the renters into a regular discharge of their revenue *than as calculated to be carried into general practice.*" The original, however, reads somewhat differently for the opinion condensed by Dr. Oldham into emphasis, and truffled with italics, was expressed by Mr. Duncan with all that caution of verbiage characteristic of him. What he actually wrote was this :—

"When the new system is introduced into Benares, it will become a subject of consideration how far the rules laid down for making the collections within the provinces may be found suitable to be either immediately or gradually introduced, or be allowed to supersede the present local practice and rules for realizing the revenue, which, although attended by some inconveniences such as might, for example, arise out of the degree of discretion thence assumable by the Amils, (as explained in the Report of November 1790, on the general settlement), of levying *tulubana* (for the amount of which they were afterwards accountable to Government) on parties in arrear, as a spur towards the regular discharge of the revenue, yet it is to be apprehended, that whatever occasional abuse this mode of process may be liable to, it can hardly be given up, though it may probably admit of further regulation ; and it may even, perhaps, be found preferable, in this district, to the introduction of the expedient that has been so long resorted to in Government of Bengal and Behar of levying the balances by the public sale of the lands of the defaulters, an extremity which, not only from the numerous *putteedars* or inferior partners who hold immediately under, though their names may not be all specified in, each Government *pottah*, but from its never appearing to have been practised as a general rule in this part of the country, may, it is to be feared, occasion considerable confusion, and even in some cases, open resistance and rebellion by any vigorous or general execution of that part of the revenue regulations in this part of the Hon'ble Company's possessions, notwithstanding the clause to that effect in the *cabooleuts* of the present Pottahdars, which is rather to be considered as useful, in as far as it may tend to awe the general body of these renters into a regular discharge of their revenue *than as calculated to be carried into general practice.*"



This is surely a very guarded expression of opinion.

I have already shown that at the very outset the sale of his lands was the penalty threatened by Mr. Duncan against the defaulting zemindar, and from the above quotation it is evident how clearly Mr. Duncan foresaw that the necessity would occasionally arise for the enforcement of that penalty. In compressing Mr. Duncan's words, Dr. Oldham has had the misfortune to lend them an exoteric force and, no doubt by often reading over his own paraphrase of them, has been misled into such an expression as this (on page 57 of the Note)—“The vehemence of Mr. Duncan's protest against auction sales.” But Mr. Duncan, never ‘protested,’ much less did he ever ‘vehemently’ protest against them. On the contrary, he explicitly threatened every zemindar that he would sell his lands if he did not pay his revenue regularly, and recorded his private opinion that this painful extremity would probably have but seldom to be enforced.

How exactly his hopeful anticipations were fulfilled the figures given in the first part of this paper prove. The threat of sale was held out to about 1,600 zemindars every year, and enforced against only three, four, or five of them. I would submit, therefore, that the sale of lands for arrears of revenue having been originated and countenanced by “the Legislator of the Province,” the charge of cruelty against Mr. Duncan's successors cannot be maintained either as to the conception or the scope of the procedure. If any one at all was ‘cruel’ it was surely Mr. Duncan himself, while as regards “illegality” it is difficult to understand how the very moderate enforcement of Mr. Duncan's sweeping threat by his successors can be called ‘illegal.’

Dr. Oldham, however, appears to understand how this may be done and, while keeping Mr. Duncan before the reader as the great source of all good, condemns both the conception and scope of the process of auction sale and extends his condemnation from the general character of the provision to the details of its occasional enforcement by the revenue authorities. He writes, “The Revenue Records afford ample proof that of all the causes of default wilful embezzlement was the most rare, and that in ninety-nine cases out of a hundred the auction sales were contrary not only to the letter of the law but to the spirit of the law, not only illegal, but cruel and unjust.”

The expression ‘wilful embezzlement,’ as constantly used by Dr. Oldham, is a very misleading one, inasmuch as the real and the whole meaning of the words is simply the obstinate withholding of Government revenue, wilful default, and as it was only in those cases where the zemindars had wearied out indulgence that the sale of their lands was confirmed, I would not hesitate to say that ‘wilful embezzlement’ (*proper*, and not in Dr. Oldham's sense) of the

phrase) was in every case, of the confirmation of the sale of an estate the direct cause of the zemindar's misfortune. And how well merited this punishment was, Dr. Oldham is, no doubt, well aware.

Another expression in this sentence is also open to criticism—"ninety-nine cases out of a hundred"—inasmuch as it is inapplicable, for there was, as far as the Benares Records show, no one year in which the sales of land, the veritable mutation of ownership in land by public sale for arrears of revenue could not be counted on the fingers. Dr. Oldham, I take it, would correct me if I, having only ten fingers and one right hand thumb among them, were to say, "in ten cases out of a hundred my fingers are right hand thumbs." The *suggestio falsi* here is evident as inducing to a belief in the public that I could count my fingers by hundreds and my thumbs by scores.

The phantasm of illegality, therefore, before it can be seriously discussed, must be reduced to its real proportions which, as it has already been shown are, at their worst, very insignificant indeed. A pea has fallen out of the rick on to the hen's head—not a cloud out of the sky as she had thought. Falstaff is beset by only one small boy.

But is there even this reduced modicum of truth in the charges of illegality and cruelty brought by Dr. Oldham against the revenue authorities of the Benares Province? The retort if held over a more steady, I cannot say a more intense, flame than Dr. Oldham's, shows no precipitate whatever. The measure originated with so much sagacity by Mr. Duncan, and gauged by him with such accuracy, was under his successors, worked with fidelity to their duty, equity to the people, and honour to themselves and Government. The very words used by Dr. Oldham, "The spirit of the law" occur repeatedly in the letters of the Board when reproving the Collector for adhering to "the letter of the law." Has Dr. Oldham forgotten the great case of Jumalpoore, Secunderpoore? How, after repeated default that estate was sold, the sale cancelled, again sold and the sale confirmed? How the ex-zemindars petitioned the Board on the plea of irregularity, and how the Board, while fully admitting "the legality of the sale," reported to Government in terms of savage censure that the Collector had acted "in contravention to the general spirit of the rules and orders?" Has Dr. Oldham forgotten how, for this one slip, Sir Frederic Hamilton who, had *then* been Collector for ten years, was threatened with dismissal, and fined Rs 3,465, or how the estate was taken from the purchaser and restored to the zemindars who, by the insolence of their continued default, had forfeited all claims to sympathy and "could not (I quote the Board of Revenue) have found redress in a Court of Judicature"?

All this was, no doubt, illegal, but the illegality was on the side of mercy, and in favour of the hereditary zemindars.

This was in 1826, and the Government of that year is, therefore, hardly obnoxious to Dr. Oldham's charge of cruelty. Ten years before this the spirit of the law was so far strained in favour of hereditary landowners as to make a zemindaree claim (when other men were offering double the terms as farmers) valid on the strength of oral testimony alone. Was this a symptom of any implacable hatred of the ancestral zemindar?

"The Board direct me to observe to you that your enquiries into the pretensions of zemindaree claimants should not be restricted to documentary evidence: when that may be wanting an opportunity should be afforded claimants of establishing their rights by testimony ..... Government, you must be aware, do not wish to avail themselves of mere formal objections against the admission of proprietary claims, and the Board, therefore, desire you will allow claimants to adduce oral evidence in support of their pretensions in future." And, again, "It is the wish of His Lordship in Council that as far as the claims of individuals to the proprietary right in lapsed farms, are opposed merely to the interest which Government may have in the re-assessment of the mehal, such claims should be admitted where there is a fair presumption of their being well founded though the proof may fall short of what is necessary to carry conviction. It is especially proper that a leaning in favour of such claims should prevail where the party may have any other hereditary connection with the estate."

All this was pitifully illegal, but the illegality was in favour of the hereditary zemindar.

To go back for another ten years, to 1810—had that Government any shameful contempt for the law that could write on so trivial a point as the necessity for the public advertisement of the *continuation* of a sale begun the day before, "*it is of the greatest importance that we should not mistake the law in the matter of land sales.*" Is it likely that this Government; so careful of the gnats, would have overlooked the camels, that, punctilious as to the details of the law where a slipshod procedure might injure the defaulter, it could have mistaken, as Dr. Oldham maintains it did, the scope and first principles of the law?

And that in 1810 the sale of land for arrears of revenue as then carried on was considered quite legal is certain from the following:—"Some delay in the punctual collection of the rents under the new (tehsildaree) system may be expected: for the zemindars, in many instances, may not pay up their revenues until coercion shall be adopted against them, but the Board observe that if prompt measures be adopted by you for

bringing to sale the lands of defaulters at the expiration of each year, the delay will be of no great moment. In cases in which the zemindars may wilfully withhold payment of their rents within the year, the Board will, on a report of the circumstances to them, recommend the sale of the defaulter's lands within the year, provided that measure should be thought necessary in preference to attaching the lands." Here we have, in a document sixty years old, the very words of Dr. Oldham in the mouths of those whom he accuses of ignorance of the law and wholesale illegality. Here are the very phrases, 'wilful embezzlement' and 'special report' (see *infra*) which Dr. Oldham strains so constantly, used in their virgin sense.

To go back for another ten years—to 1800,— we find the procedure pointed out by Dr. Oldham (on p. 19 of his Note) as that which ought to have been, but was not, followed by the revenue authorities, laid down almost word for word as he enunciates it:—

"In the present instance the revenue is stated to have been payable to a tehsildar, and the rules for collecting such revenue, exclusive of Section 2, Regulation 6, 1795, for stationing watchmen on the crops until security be given, are contained in Sections 3, 4, 5, 10, 11, 14, 15, 16, 17, 18, 19, 20, 21, and 22, of the above Regulation, with some of the succeeding Sections which it is unnecessary to specify. Under the above rules if the Malgoozar or his surety shall not discharge the revenue due, on the issue of the tehsildar's *dustucks* in conformity to Sections 3 and 10, they are to be sent as directed in Section 11, to the Collector who, at the expiration of ten days, if the arrear be not then paid, is authorized to cause their confinement in the Jail of the Dewanny Adaulut, and to direct the tehsildar, under Section 14, to sequester the defaulter's share of the assessment on the crops to the end of the year or until such time as he shall have paid the balances due from him. *At the expiration of the year, if any arrear remain due, it is recoverable by a sale of property or otherwise under the several Clauses of Sections 17 and 18.*" Dr. Oldham does not quote the last sentence.

To go back yet another ten years is to find ourselves where we started and to find Mr. Jonathan Duncan, "the Legislator of the Province" threatening every zemindar who accepted a pottah with the sale of his lands. So that, taken decade by decade, the period inveighed against by Dr. Oldham, as signalled throughout by cruel injustice towards the hereditary zemindar, shows rather a very consistent policy in which the quality of mercy was certainly not strained. To fill in the skeleton would be the work of a mere copyist, for the Benares Records contain a mass of evidence (if the above is evidence) to prove that no year passed between the dates of the Collectorate of Benares and the Govern-

ment of Agra, in which the anxiety of the revenue authorities in behalf of the hereditary zemindar was not signally and conspicuously recorded.

Among Dr. Oldham's illustrative atrocities are "the Murdeh case" and "the case of Jobraj Roy."

Of the former, he says:—"On the 25th April, 1817, the village of Murdeh Khas, Pergunnah Puchotur, of which the Government annual revenue is Rs. 1,354 per annum, was sold for the sum of Rs. 6. The zemindars tendered the balance due from them two days before the sale to the Peshkar of the Ghazee-pore tensesel. He refused to take it, and they started for Benares and arrived there one day after the sale was completed. This sale appears never to have been cancelled and the auction purchasers are still in possession of the village."

From this it would appear that Dr. Oldham had discovered an iniquity which, sixty years ago, was regarded quite as a matter of course, and that Murdeh Khas was actually sold then and there for six rupees. But where Dr. Oldham writes: "This sale appears never to have been cancelled," there should have been written. "*This sale, however, was never confirmed.*"

It appears from the Benares Records that in April 1817, the Collector of Benares reported the extraordinary sale of Murdeh Khas to the Commissioner, and a few days after wrote again informing the Commissioner that soon after the sale had been effected he had received an offer to purchase the estate if re-exposed at a sum equal to the balance for which it was originally exposed. The Commissioner on May 8th, replied to both these letters: "If any error or any fraud has occurred in regard to the sale of Murdeh Khas, the Commissioner would withhold confirmation of it. But the low price alone would not be a sufficient ground for reversing the sale. Mr. Barlow (the Collector of Ghazee-pore) has been directed to report on the case. The offer alluded to in your second letter leads to an inference that some mistake has occurred. It cannot, of course, be accepted, the only mode of selling lands for arrears being that of public auction." To this, on May 17th, the Collector replied that "neither fraud nor error had been discovered in the sale of Murdeh Khas." Meanwhile the Commissioner had written (on May 8th) to the Collector of Ghazee-pore ordering him to report on the case, but it was not until October 16th that Mr. Barlow replied. He then narrated the circumstances of the proprietors' offer of the balances to the *peshkar* at Ghazee-pore two days before the sale was to take place at Benares, his declining to receive it in consequence of the shortness of the interval and their appearance at the Benares cutcherry the day after the sale. Upon receipt of this the Commissioner addressed the Collector of Benares, and

"under the circumstances stated by Mr. Barlow" *declined to confirm the sale*. He writes: "I cannot confirm the sale of Murdeh Khas, and the Collector of Ghazepore has been instructed to call upon the defaulting proprietors for the balances which may be due from the estate."

The auction purchasers, therefore, who are stated by Dr. Oldham, to be now in possession of the village must have purchased Murdeh Khas at some subsequent sale and no doubt at some price more adequate to its value.

Of the 'case of Jobraj Roy,' Dr. Oldham, after giving prominence to censure passed on the Collector by the Board before, and withdrawn after, they were in possession of the whole facts of the case, continues:—

"The following is an extract from Mr. Salmon's (the Collector aforesaid) reply:—

'From my report it may certainly be assumed that Jobraj Roy had paid the public assessment on his estate for a period of twenty years with punctuality, is a deduction drawn in the latitude of mercy which characterizes the Board rather than from the absolute letter of the record. In like manner there is reason to suppose that the estate was an old possession of his family from old times, but I fear these excellent qualities and these ancient rights will not, in general cases, exempt from perpetual responsibility under the law or supersede penalties prescribed for default.'

The original, however, reads very differently:—"From my report it certainly may be assumed that Jobraj Roy had paid the public assessment on his estate for a period of twenty years 'with punctuality,' is a deduction drawn in the latitude of mercy which characterises the Board rather than from the absolute letters of the record. In like manner there is reason to suppose that the estate was an old possession of his family from old times, but I fear these excellent qualities and their ancient rights will not in general cases exempt from perpetual responsibility under the law or supersede penalties prescribed for default. *The regulations undisguisedly define that the malgozars of Government contract by their engagements to discharge the revenues at the stipulated periods without delay or evasion or in the event of failing in the punctual discharge of the public revenues that a sale of their lands will positively and inevitably take place.*"

Dr. Oldham omits the very important sentence I have italicised and takes up the extract again after the word 'place' concluding by putting the following admission into Mr. Salmon's mouth:—"It may certainly be alleged that this is frequently a hardship, upon the malgozars of Government whose ruin and distress may ensue from the faults or frauds of co-partners

rather than from their own," with a full stop after the word "own" as if nothing had followed it. In the original, however, there is no punctuation at "own" and the sentence runs on thus "but in the language of the old commentators '—  
*est sed ita scripta est lex*' and the Board themselves have recognised such responsibility when they observed in the case of holders of decrees, who had from the time of obtaining their decrees to the time of sale contracted to joint tenantry that 'if they will not take timely measures for availing themselves of the right awarded to them, and for securing that right from the consequences of fraud in their co-partners they have only themselves to blame and must abide by the risk.' " This surely makes a very serious change inasmuch as that which in Dr. Oldham's version appears as an apologetic admission of fault was really the first half of a very strong argument in the Collector's self-defence. The mischief of these singular inadvertences is much aggravated by Dr. Oldham's subsequent observations on his own inadequate version of Mr. Salmon's reply. These observations are as follows :—

"In this case, from the admission of the Collector, the default did not arise from the wilful embezzlement of the funds of the estate. Jobraj Roy was not himself in default, and under the provisions of Section XVII., Regulation VI, 1795, was entitled not only to exemption from sale, but to have the shares of the defaulting *putteedars* made over to him. Nevertheless, with a full knowledge of the facts of the case, and with a most strongly expressed opinion of its hardship, the Furruckabad Commissioners, in their letter of the 3rd September 1811, confirmed this most illegal and iniquitous sale." Let us take Dr. Oldham's observations one by one.—

"*The Admission of the Collector.*"—There is no admission in the original for what Dr. Oldham has published as an admission, was only the first-half of a denial.

"*The default did not arise from the wilful embezzlement of the funds of the estate.*" Jobraj Roy himself swore that it did. It is recorded in his evidence that he stated on oath that Rampersaud, his co-partner, "had made away with all the collections in order to ruin him and cause the estate to be sold."

"*Jobraj Roy was not himself in default.*" Jobraj Roy was in default. In the Collector's records on the case he is called 'Jobraj Roy the other defaulter,' and Jobraj Roy in his petition, consented to pay "a part of the balance agreeably to his share." The estate was an *ekjiye*, a joint undivided property, in which Government was no more able to define separate liabilities without the consent of the co-parceners than in the spine of the Siamese twins.

"*Under the provisions of Section XVII of Regulation VI. 1795, Jobraj Roy was entitled not only to exemption from sale,*

but to have the shares of the defaulting putteedars made over to him." Let Mr. Salmon defend himself:—"The Regulations do not reserve to Government the power of ordering divisions of estates when such partition may be expedient for the security of the public revenues. The option of division is exclusively limited to individuals," and again "if the pleas of the *putteedars* in joint undivided estates were to have been admitted and acted upon, as often as made, and if these pleas were to have been sufficient to have saved the estate from sale for public balances, why has Regulation IX. of 1811, and particularly Sections IX and XIII of that Regulation, been enacted."

Mr. Salmon continued: "Even that Regulation itself does not provide for the postponement of sales of estates on the plea of *putteedars* who shall not previously have adopted measures for obtaining a separation of their shares, nor does it provide for compelling the *putteedars* to such divisions if the security of the public revenue should call for it. But does it appear that Jobraj Roy ever did get up these pleas to the proper officers and at the proper time? Did he ever say that he individually was not in balance for his *puttee*? Did he ever say that his partners were the sole defaulters, and that he would endeavour to make good the public dues, that he was ready to furnish security himself for the same, and that he would then pursue the measures of the law to obtain re-payment from them? Did he report that he was willing to pay to the 'utmost of his ability'? Indeed, neither my recollection nor my records satisfy me as to this. I suppose he must have alleged this much to the Board, and the Board have placed reliance in his veracity." After going on in the same strain for some time to show that Jobraj Roy had been gulling the Commissioners, the Collector concludes:—"Lastly, did Jobraj Roy otherwise than by his unsupported assertion to the Board, on the said day of sale, manifest his willingness to pay? It is recorded in my official proceedings that he was asked whether he had the money in readiness, to which he replied that his partners "were coming from the mofussil with the money." Was that a sufficient answer to postpone the sale of the estate for a balance which exceeded half of the year's jumma? After the shifts of Jobraj Roy and of his partners could any dependence be placed on this assertion? If I had postponed the sale I should have been condemned under the very orders of the Board which direct that no postponement of a sale ought to take place merely as a concession of time at the solicitation of the party without satisfactory assurance of payment at the future day except in cases where the balance itself may be disputed, and, as an example, would have been most dangerous for every defaulter at the sale would have urged that excuse and formed a precedent for its unqualified,



admission. But even on that day Jobraj Roy escaped, for the sanction of Government had not been received and the sale was postponed till the 11th of October, which was certainly full time for the slow-paced partners to have arrived as promised by Jobraj Roy, and almost time enough for Jobraj Roy himself to have gone and returned from the Pergunnah. On the 16th of October the estate was again exposed, and Jobraj Roy returned the same answer. If aught remained to be done but to proceed to the sale, I do implicitly bow and acknowledge to my own disgrace that I know not the nature and duties of any appointment as a revenue officer of Government." The remainder of this letter has unfortunately been torn out of the original volume, but the fragment quoted above proves that the Collector could plead in his defence the strongest of all pleas—the law both in its letter and its spirit, while the final confirmation of the sale by the Commissioners proves that they admitted the force of that defence. "With regard to mouza Hindoopoor Kinjara, the Board observe that as Jobraj Roy admits his joint occupancy of the estate and his joint responsibility for the revenue, although his actual right extends to no more than a portion of half of the estate, the Board are, therefore, of opinion that all his interest has been legally sold, as well as that of Rampershad, and that he cannot be allowed to re-enter on the property without the acquiescence of the purchaser."

Whether the purchaser acquiesced or not is not stated, but it is more probable that he did, for the Jobraj Roy stamp of man was, as he is now, a dangerous enemy to an auction purchaser and a very noxious element of village society. He was a typical specimen of the refractory and insolent zemindars who, when their estates were advertised for sale, used to crowd into cutcherry on sale day, and though they had the amount of their arrears tied up in their kummerbunds, contented themselves with screaming and yelling while their lots were being bid for, tossing their turbans about in the air and scrambling under the Collector's table to catch hold of his feet, and who as soon as their lot was knocked down used insolently to produce their money and, rupee by rupee, count it down on the table, and after seeing the Collector's pen drawn through the purchaser's name left the Cutchery grinning. Here is another picture of the Jobraj Roy of the period, drawn by the same Collector in the same year. "In the like manner the regulations do not reserve to Government the power of ordering divisions of estates when such measure may be expedient for the security of the public Revenues. The option of division is exclusively confined to individuals. The Board are aware, I suppose, of my remarks concerning the Revenue balances of this province that the great part of them are owing to the disputes and jealousies and mutual suspicions of the

Putteedars and Lumberdars, persons answerable directly to Government. Most of the lands, on this account, of purgunnah Secunderpore have, for the last three years, been regularly annually exposed to sale for balances, and very often, till the very day of sale not one cowrie of any one kist has been paid, and though the dustuck are regularly issued and repeated for every kist, in so much that the amount of tulbannah frequently comes to hundreds of rupees, not one has obeyed either by payment of money or surrender of person. When the estate is proclaimed at the time of the sale, the Lumberdars probably appear attended by a host of Putteedars and are asked why they have not paid their revenues regularly.—They reply that their Putteedars have not paid them. They are asked whether they have now brought the money to save their estate from sale.—They reply that they and their Putteedars have brought it. Each man then takes out his separate bag and they begin to lay down, rupee by rupee, according to his alleged quota contending and bickering all the time, and if any one person should be deficient they will all take back their money and refuse to pay any part, and it is not, perhaps, till the estate has been bid for and is at the point of being finally knocked down that they can agree among themselves to rescue it. They return to the Mofussil and continue quarrelling as before, and the same scene recurs annually or perhaps twice in the year. In such cases surely it would be better that Government should exercise an authority and compel the division of estates, rendering all the Putteedars independent of each other, and severally answerable for the Government revenues. In such cases the expenses of the division should be borne by all in the proportion of their shares, and in the event of its being established that any one Putteedar obstructed the division his shares should be confiscated to Government.” In the particular case of Jobraj Roy, his estate fell in arrears and in defence he swore that his partner was trying to ruin him. While the estate was being bid for he was standing outside the cutcherry but would not come in to say a word to suspend the sale, but after it had been knocked down, in came Jobraj Roy. It was explained to him that he ought to have come into cutcherry when he knew he was being called for and that the sale “having been made, could not, in good faith, be revoked without the consent of the purchaser, and that if he had anything to urge in the case, with respect to his own share he must present a petition.” Jobraj Roy, accordingly, presented a tissue of falsehoods, and, on this, the Board censured the Collector. Mr. Salmon, in reply stated the facts and the Board then upheld him. (The case did not end here, for the heirs of Jobraj Roy brought it again *sub judice*, but for the

present purpose there is no necessity for referring to those proceedings.)

Neither in "the Mündeh case" nor in "the case of Jobraj Roy" can Dr. Oldham be said to have been happy in his choice.

Another special point selected by Dr. Oldham for emphatic writing is the deprivation of the sold up Zemindar's privilege of holding his seer lands at a lighter rate than his neighbours and "the doctrine, that a Zemindar, when he loses his position as a village lessee, reverts to his position as a privileged cultivator" is blazoned in capitals on Dr. Oldham's pages. And Dr. Oldham's process for establishing this position is even more original than those already noticed, for, in support of the doctrine that the Zemindar in the Benares Province is entitled to enjoy his seer land at an assessment lower than the prevailing ryotee rates, Dr. Oldham quotes a large quantity of a Regulation\* drafted by Mr. Harington in 1827, and written especially in defence of the rights of *ryots*, and these "the peasantry of Bengal" a regulation which the Revenue Officers of the day and his Excellency the Right Honourable the Vice-President in Council agreed in condemning! Dr. Oldham gravely introduces this draft thus—"a Regulation was drafted by Mr. Harington under the orders of Government, in 1827, at a time when Mr. Holt Mackenzie, Mr. H. T. Prinsep and other Officers of equally profound knowledge of the revenue system were the advisers of the Governor-General." This regulation \* \* \* was not passed." The explanation of so extraordinary a fact as that Mr. Harington's revelation should not have become law when such able men were round the Council table, was this that those officers who, as Dr. Oldham says, being "distinguished for their ability and their profound knowledge of the revenue system" were "the advisers of the Governor-General" condemned the measure as being certainly inexpedient and doubtfully just! The Resolution on Mr. Harington's Regulation (which by the way does not appear to have been drafted "under the orders of Government") opens with the following: "The Vice-President in Council having carefully considered the Minute and Draft of Regulation above mentioned, finds difficulty in resolving on the adoption of the measures recommended, entertaining doubts as to the necessity of some, and as to the expediency and justice of others of the enactments contemplated."

And this abortive regulation drafted for quite another object than that to what it is applied by Dr. Oldham, is all that is cited in Dr. Oldham's Note to support the privileged-cultivator 'doctrine'—except a remark from one of Mr. Duncan's letters to his Assistant regarding some *excluded* Zemindars of Kurrendah. Mr.

\* "Rights of Ryots in Bengal, by the Hon'ble J. H. Harington, Esq.; 1827."

Duncan said "meanwhile (until some allowance could be decided upon for them) they will, as usual, be allowed their own seer neej-jote or other lands they themselves cultivate, which I believe, always let at more moderate rates than the other lands" and to this, Dr. Oldham adds "in Section XVII<sup>9</sup> of Regulation VI. of 1795, the fact that even the most inferior family putteedar holds his neej-jote on favourable terms is recognised." But, is it not stated in the first clause of that section that the Zemindar's privilege is dependent on the pleasure of the new malgoozar? This is not my own reading of the section but that of the Commissioner and the Collector of Benares, in 1837.

The new Rent Act for the North-West Provinces recognises the "ex-proprietory tenant," and in doing so gracefully sacrifices four annas in the rupee to local sentiment, and the usages of Benares. But in 1837 the Commissioner "of the 5th Division" recorded his opinion that defaulting Zemindars "if they are allowed to continue in possession of their seer lands, must pay to the farmer at the established ryotee rate of the village, for similar land." The following is the interesting correspondence :—

TO COMMISSIONER,  
5th Division.

SIR,

As required I have the honour to report on the petition of Lautoo Tewaree and Hunooman Tewaree \* \* \* They put forward three claims.

1st.—That they are entitled to hold their seer lands on the jumma at which they were assessed during the time they were in possession as Zemindars while the farmers wish to increase the rate of assessment to that of similar lands on the same estate, or to oust the Zemindars from their lands, and to cultivate them themselves.

2nd.—That the farmer has raised the rents on the petitioners and other ryots.

3rd.—That the farmers cut trees and otherwise damage the estate.

\* \* \* Except on the 2nd claim I have found an opinion unfavourable to the Zemindars.

On their first claim, it appears to me, that under Section XVII of Regulation VI of 1795, the defaulting zemindars are not entitled to hold their seer lands except at the will of the farmer or had a provision been made in the settlement to that effect. In clause one of the above quoted section the neej-jote ground or other land of the Zemindar is retained to the defaulter only when the new Malgoozar shall be willing to allow him to hold it, while, in the fourth clause, no provision of the kind is mentioned. The question is constantly arising between the farmers and the defaulting Zemindars and though, in many cases, by preventing an increase of the jumma bundy the farmers are not allowed to enhance the assessment on these seer lands, and thereby, the defaulting Zemindars are kept in possession at their own terms, still it seems,

somewhat hard on the farmer to expect him (as in this instance) to pay the same jumma as the defaulting Zemindar without the same favourable advantage, for in every estate many beeghas of the best land are set aside at a mere nominal rate as the seer or neej-jote of the Zemindar.

Lautoo Tewaree etc. wished in this case to prove that the farmers were sharers in Mowzah Gopeepore but as there had been a division of the property they could not be allowed: however, the petition for the farming arrangement, is doubtfully worded. There are several instances of estates where the farmer being prevented either from taking these lands into their own hands or enhancing the jummas of them, have been obliged to relinquish the settlement. Taking this view of the case I have at present disallowed the Zemindars' claim though as this will become a precedent I beg to be favoured with your orders on the subject.

BENARES, }  
June 15, 1837. }

I have, &c.,

To COLLECTOR.

*Benares.*

SIR,

I have the honour to acknowledge your report on the petition of Lautoo Tewaree and another. I am of opinion that in estates farmed on on account of arrears of revenue under the provisions of clause 4 Section 17. Regulation VI of 1795, the old zemindars, if they are allowed to continue in possession of their seer lands, must pay to the farmer at the established ryothee rates of the village for similar lands.

GHAZEEPORE, }  
June 24, 1837. }

I have, &c.,  
(COMMISSIONER).

It is therefore incorrect to suppose that "the doctrine that a Zemindar on losing his position as a village lessee reverted to his position as a privileged cultivator" was ever universally recognised. A certain sentimental sympathy and considerable personal fear on the one part, and a great deal of threatening arrogance on the other, no doubt originated the seer-land arrangement between the novus homo and the ex-zemindars. The conservatism of the country maintained it and now it has become law. But any ill-conditioned farmer or auction purchaser without a soul for sentiment might with all legality have raised the rent on the fat seer land he had paid for; and, though Dr. Oldham shudders, (on page 9) at the thought, have heartlessly forbidden the ex-zemindars "to cut a twig off the neem tree wherewith to clean their teeth."

But in an article such as this it would be out of place to examine one by one all Dr. Oldham's numerous statements and opinions. It is sufficient to have contested his three strong points—the frequency, the illegality, and the cruelty of auction sales for arrears of revenue in the Benares Province and to have dissected three of his leading illustrative cases. But to give a general idea of the glaucous tone of Dr. Oldham's composition, I would notice here in succession the first five facts given in his Note.

(1) "From statistics collected in 1871 and 1872, it appeared that the crime of infanticide is most practised by those Rajpoot tribes who have lost their ancestral estates; (2) In 1808 a military force was sent to quell the disturbances in part of the Ghazepore district. (3) In 1812 A.D. a magistrate was deputed to Ghazepore for the express purpose of suppressing the "serious and disgraceful outrages" and affrays committed in the neighbourhood arising from these sales. (4) So numerous were the cases that in a single month, July, 1813, four hundred and ninety-nine persons were arrested by the Ghazepore Magistrate (5) On the 31st January 1816, the Collector of Benares reported to his official superiors the complete subversion of his authority in part of the Jaunpore district, and that, owing to the auction sales for revenue, fifteen thousand eight hundred of the Rajpoot zemindars were in arms and completely overawed and set at naught the officers of Government."

(1) "The crime of Infanticide is most practised by those Rajpoot tribes who have lost their ancestral estates." This is very likely to be true inasmuch as these Rajpoot tribes, *before* they lost their ancestral estates, were the leaders in this hideous crime. About a hundred years ago Mr. Duncan found infanticide almost entirely confined to "those parts of the country where the Rajkoomar tribes resided," and the men who thus murdered their children were then in full and very riotous possession of their "ancestral estates."

(2) "In 1808," we read, "a military force was sent to quell the disturbances in part of the Ghazepore district," Dr. Oldham here leaving it to be understood that these disturbances were owing to auction sales. The disturbances referred to were, however, owing to disputes about alluvial land, and the Collector writes regarding them (in the draft of a Regulation, December 5th, 1808) "serious disputes leading to bloodshed and disturbance of the public peace frequently obtain through a desire of acquiring unqualified and unauthorized possession of gungberamud lands." In the same year also the Collector of Benares reporting on the unsatisfactory state of Ghazepore says, "party spirit, intrigue, and frauds prevail to a shameful and shameless extent." So that as a matter of fact two other and very distinct explanations may be

offered for the disturbances which Dr. Oldham attributes solely to auction sales.

The date 1808 may, however, be a misprint for 1803, for in that year a body of men was sent to Ghamur in Ghazeepore to keep in order some zemindars whose estates had been attached by the Mirzapore court two years before. The zemindars of Ghamur, of Zemaniah generally, indeed, of nearly the whole district of Ghazeepore, were a turbulent lawbreaking set, and instead of acknowledging the authority of the Adawlut "behaved towards the officers of Government with the greatest indignity and contumacy." In 1803 the Collector was compelled to go to Ghamur in person in consequence of the serious defalcations of revenue, but the zemindars refused to wait upon him, rifled the putwarree's records and finally carried off the putwarree himself. Military aid was therefore resorted to. If this is the case to which Dr. Oldham refers, the following translation of an *urzee* from the Ameen on deputation will explain the real cause of the trouble which it will be seen, was not auction sales at all, but alluvial disputes between the three estates of Ghamur, Shairpore and Burreh.

*(Translation of an urzee from Permanund Ameen at talookah Ghamur in Pergunnah Zemaniah, dated 17th September 1803, E.E.)*

"I have before now repeatedly represented to you the refractory conduct of the zemindars of talookah Ghamar in pergunnah Zemaniah, but no steps have been taken to bring them to punishment. I have, however, through your support, made them, in some degree, sensible of the loyalty due to the British Government \* \* \* but the Affghan residents of Burreh have opposed me in the attempt, and forcibly cultivate the lands of talookah Ghamar, asserting them to belong to Burreh. One day I took the ryots of Ghamar over the river, to make a division of the lands when the Affghans appeared in a body and were ready to raise a fray, and had I not been present at the time, bloodshed would have ensued, to avoid which, however, I returned back to this side of the river. Although I have persuaded the Affghans to show me the *fusulnamah* and their cultivated lands, according to it, yet they will not attend to my injunctions, but forcibly cultivated the lands of Ghamar attaching them to Burreh. The zemindar of the talookah Shairpore, also holding the *fusulnamah* of Mr. Duncan's time will not abide by it, but have forcibly possessed themselves of a part of the lands of Ghamar. \* \* \* Were a military force to be detached and stationed here, I would dispose of the grain and such other property as I could seize and secure the proceeds of them, as also adopt measures to apprehend the zemindars."

(3) "In 1812," says Dr. Oldham, "a magistrate was deputed

to Ghazee-pore for the express purpose of suppressing the serious and disgraceful outrages and affrays committed in the neighbourhood arising from these sales." The authority for the insertion of the all-important words "*arising from these sales*," being, it must be supposed, given by the document from which Dr. Oldham quotes the words "serious and disgraceful outrages." This document I have not, however, met with, but others are before me which, while they show that Ghazee-pore was certainly in 1812 quite as disorderly as usual, do not so much as mention auction sales.

In 1809 the disgraceful state of the Ghazee-pore *Police* was first brought to the notice of Government by the murder of a havildar, and afterwards, of two Sepoys when travelling in that district; and on enquiry it was found that the highroads of Ghazee-pore were the regular *rendezvous* of dacoits and murderers. In that and the following year (1810) the Ghazee-pore Police therefore, underwent considerable reform. The whole Police system of the Province was however then under discussion, and, in 1812 (the year Dr. Oldham refers to) on the representation of the Superintendent of Police, a Special Officer, Mr. Loch, was deputed to Ghazee-pore to *superintend the mofussil police thannahs*. The following is the correspondence, and it will be seen that the deputation of Mr. Loch instead of being a special measure, called for by the mischievous effects in Ghazee-pore of the revenue law, was simply a part of a general Police reform.

(Extract from a letter from the Superintendent of Police in the North Western Provinces, dated the 20th May 1812.)

"Para. 24.—It is not necessary, I conceive, that I should enter into a further detail of the defects I have observed to exist more or less in the Mofussil Thannahs of Benares as the inefficiency of the Mofussil Police has, at different times, I believe, been stated to Government by the Magistrate himself, and it was, I presume, in consequence of Mr. Watson's representations on the subject, that his Assistant, Mr. Bird, was deputed in November 1800, to act at Ghazee-pore with the powers of Magistrate. I am also informed that another Assistant in the Benares Court, and latterly, Mr. Watson himself have visited Ghazee-pore with a view to the reform of the Police in that quarter, but it is much to be regretted that the residence of those gentlemen was too short to afford the benefits which would otherwise have resulted from the exercise of their authority on the spot.

25.—"It is generally said that when Ghazee-pore was the station of a Sudder Court, crimes were not prevalent, but from what has been stated in this address it will have appeared that the reverse is now the case. When the jurisdiction was dismembered and transferred to the adjacent districts, it is probable, I conceive, that



had a Magistrate or an Assistant to a Magistrate been continued on the spot, things would have proceeded in their former course, but the total removal of the controlling power, from the place at which it had been long established and the annexation of the different portions of the jurisdictions to Courts, from which they are at so very remote a distance, has weakened the police throughout, and, it is certain, that the thannahs annexed to Benares, Jounpore, and Mirzapore are become notorious for the frequency of affrays attended with murder, and for resistance to the authority of the Magistrate and of the Collector, whose orders are almost wholly disregarded in those parts of the districts alluded to.

26.—“The considerations which I have had the honor respectfully to submit appear to point directly to the expediency of an officer being appointed to act with the powers of Magistrate at Ghazee-pore.”

(4) “So numerous were the cases that in a single month, July 1813, 499 persons were arrested by the magistrate.” The number of persons arrested by a police magistrate, in any month, can hardly be considered a criterion of the working of the revenue law if it is not at the same time shown that their crimes arose from the defects of the law. This is not shown by Dr. Oldham. The following letters may, or may not, be read as commentary on the above. The magistrate of Benares wrote on the 22nd of July 1813 to Mr. Loch (the magistrate referred to by Dr. Oldham) “I request that in all the commitments you may make, on account of this month, you will despatch the prisoners and witnesses on the morning of the 18th proximo. Pray let me know on receipt of this how many commitments there will be.” To this, on the 31st of July 1813, Mr. Loch replied “I beg leave to acquaint you that there are no commitments for this month.” Dr. Oldham’s 499 prisoners must have been very sorry offenders if not one of the whole lot was worthy of commitment for trial.

(5) “On the 31st of January 1816 the Collector of Benares reported to his official superiors the complete subversion of his authority in part of the Jaunpore district, and that, *owing to the auction sales for revenue*; 155,800 of the Rajpoot zemindars were in arms and completely overawed and set at naught the officers of Government.” I have italicised the important words, “Owing to the auction sales for revenue,” as from the records it would appear that internal dissension among the zemindars, the obstinate contumacy of one man in refusing to allow his partners and caste men to become peaceable, was the actual cause of the Collector’s anxiety. The tehsildar of the pergunnah reported to the Collector that Angolee was in a very unsatisfactory state, that in 1806 some villages belonging to “Bulwant Singh of the Rajkoomar caste” had been sold for arrears of revenue to Rajah Sheo Lall Dobei who gave

them up in despair in 1811, when, by a second sale, they passed into the hands of Nawab Akbur Ali Khan, who also could make nothing of his purchase and gave it up, so that in 1813 a sezawul had to be appointed to hold them kham. Bulwant Singh had died meanwhile, but his sons Bhugwunt Singh, Hunwaree Singh, Sheodeen Singh, and Duleep Singh, treated the sezawul as their father had treated the auction purchaser. So that in 1816 Government was a loser by Rs. 18,706. The report continues; "and now the aforesaid zemindars are quarrelling among themselves about their shares. Bhugwunt and Sheodeen Singh and Hunwaree Singh are ready to pay the revenue of their own shares, but Duleep Singh, one of the sharers, who has in his employ 45 matchlock-men, is in occupation forcibly of the whole mouzahs and makes away with all the produce, and does not allow the putteedars or officers of Government to enter \* \* \* Bhugwunt Singh and the others present stated that if Duleep Singh was dispossessed from the mouzahs they would pay up the balances, so I sent a jemadar with four chupprasees to aid the three zemindars, but Duleep Singh forcibly turned the jemadar and his party out of the mouzahs.

There are 204 lumbers, i.e., estates under separate pottahs within the tehsildaree of pergunnah Angoollee, 38 of which are held by persons of the Rajkoomar and Cutchwyah castes, and the other 160 by persons of other castes. The estates of these Rajkoomar and Cutchwyah castes are very extensive, the revenues collected from them very small, and their gains very great and in no proportion to the sircaree jumna. These Rajkoomar and Cutchwyah castes have granted jagheers from their lands and retain some 500 and some 700 matchlock-men; a computed account of their number is written below. When they assembled a gohar they sound the nukarah (drum) and in a short time thousands of armed men of their castes collect from every side. From ancient times they have been a rebellious set and seldom come near the amil and tehsildars of the Government, and, if at any time, one of them should come he comes attended by hundreds of matchlock-men. Formerly the amils of the sircar, on account of their receiving the deyuk commission, and having under their control the police of the country, used to keep hundreds of men and were consequently respected. Still their frequent rebellions and balances of Government revenue were withholden, and the assets of the revenue were forcibly made away with. The amil of the time being used to realize the revenues by forcible means of plunder, and if sometimes the defaulters fled and escaped, he himself made good the revenue in consequence of his engagements as a deyekdar tehsildar from his own funds. Owing to the rebellion of these people in the time of Rajah Sheo Loll Dohbhy the deyekdar, the tehsildar of the pergunnah on one occasion the

troops of the sircar were sent into his tehsildaree and made forcible levies.

The balances of these mouzah since 1222 Fuslee have accumulated to the sum of 187,062-1-8, and if, in order to realize such balance, the lands of the defaulters are put up to sale, none will buy them on account of the refractoriness of the zemindars and the impossibility of getting possession. Some people who have purchased lands in former years have never been able to obtain possession. This circumstance has occasioned a further obstruction to the measure of selling lands in the tehsildaree. Since 1217 Fuslee the revenue has every year become less and the balances greater, previously to this time the Huzoor sometimes came here, and on some occasions the Registrar of the Adawlut also came with a military force. When revolvers see only a small party they are ready to persist in their revolt and to oppose them, and when they see a superior force they fly to the confines of the Nawab Vizeer's dominions which adjoin, and there remain hid so that none of them are taken, and none of the balances realized from them. If it goes on much longer in this way there will soon be no revenue at all, and the whole of this tehsildaree will pass into the hands of the revolvers like jagheers and lakhraj possessions, and from the gains thereof their power will yearly increase, and it will become more difficult to put an end to them. I was tehsildar of pergunnah Agoree Burhur from 1218 Fuslee to 1221 Fuslee, and it is known to the Huzoor how punctually I would realize the revenues there, but here, notwithstanding all the exertions I have made and am making to get in past balances or the future balance, they are, for the reasons I have above assigned, totally ineffectual. I beg to suggest as plans for the realization of the balances and to secure the attention of the future revenues; first, that a military force be put into the pergunnah to seize the revolvers and to plunder their houses and banish them from the country, so that, when they are gone, other people may be established as inhabitants in their place with whom a new settlement may be made, and from whom the revenue may be collected."

The above, in no way important in themselves, go collectively to show that Dr. Oldham has read with glamoured eyes. By looking fixedly for some time at the dazzling iniquities of the three great tehseeldars, Deokiniundun, Sheo Lal Dobeh, and Furzund Ali, Dr. Oldham sees wherever he looks on the page of history a dazzling blur. But Sheo Lal Dobeh, Duncan's special protégé, did right royal service in clearing Budlapore of its hereditary miscreants, and for this was rewarded with the ancestral *talooka*, and made a Rajah. After this, it is only too true, he abused his great power to amass landed property, but what is the position of the present representative of the jewel-peddler? Furzund Ali, again;

acquired large estates by force or fraud, but, as Dr. Oldham says, "the family of Furzund Ali are now poor." Deokinundun also was infamous in fraud, but his great grandson is now as hereditary as any of these jemadars whom his ancestor swindled out of their estates, and if Dr. Oldham will only be content to wait in hope a profligate cadet may yet arise to work the revenges of time and squander away the patrimonial estate. There were giants in these days and of a race which is now quite extinct.

But Dr. Oldham while still reeling under his first discovery of the enormities of 1800, received a finishing blow by the perpetration in 1868 of those two iniquitous judgments mentioned on page 8 of his Note, and with an Alpha and an Omega thus ready to his hand he filled in the full alphabet of crime and cruelty.

Dr. Oldham to support this charge of cruelty lays stress on the inadequate prices for which some estates were sold. Thus he seeks sympathy for the recusants of Murdeh Khas on the ground that their estate was sold for six rupees, but, as I have already shown, it is not on record that that estate did change owners at that figure. In another place, indeed in several places, Dr. Oldham returns to this point that the sale of estates by auction was aggravated by the smallness of the balances for which they were sold, or the inadequate prices at which purchasers were allowed to buy. If I were contesting Dr. Oldham's views instead of his facts, I should, of course, appeal to the now hackneyed truths that, at a public sale, by auction, any interference with the bidding would have been unjust and immoral; further that Government could not in common honesty exercise any right of pre-emption or, if it did, could not have afforded to hold *kham* at a ruinous loss the estates which it bought in, and by so doing I should expose the very unpractical nature of Dr. Oldham's complaints. At any rate the revenue authorities of Benares in 1820 cannot, I take it, be held at fault for the small value of landed property fifty years ago, and after the lapse of half a century it is impossible to say what causes may have been at work to depreciate that value. The following phrases, however, taken from the records of three successive years are noteworthy as showing that the zemindars were not always much concerned about the loss of their lands—(a) "as the zemindars have twice refused to comply with the conditions on which it was proposed to restore them to their property, the Board must confirm the sale should the interest not have been paid up"—(b) "as the proprietors have not offered any objection to the sale, the Board presumes that it is not their wish that the sale should be annulled: the sale is accordingly confirmed"—(c) "the proprietors not having attempted to avert the transfer of their lands, the sale may stand good." But I am rather concerning myself with Dr. Oldham's facts and when, therefore, he enunciates

as an axiom that fifty years ago 'ancestral' estates were, as a rule, allowed without any compunction to go for a mere song, I would content myself with saying that, so far from this being the rule, it must have been a very rare exception indeed. For confirmation of my opinion I would refer the reader to the tabular statements I have given above and to the following formula which occurs repeatedly in every volume of land-sales correspondence. "The Board desire that when the balances are inconsiderable, compared with the sudder jumma, you will not proceed to the actual sale," and to this, "the Board must leave it to the discretion of the Collectors to sell or not as they may judge proper. It is sufficient for them to express generally their desire, that sales shall not take place when the balances are inconsiderable when compared with the sudder jumma." This injunction was repeated *seven* times in one year—1819. In the volume for 1821 nearly every letter acknowledging the receipt of the Collector's proposed sale-lists contains the following formula—"The Board approve the advertisement of the sale, but trust to the discretion of the Collector in not proceeding to the actual sale of the estates, the sudder jumma of which bears a large proportion to the balance due," or, as it is phrased in some of the letters, "desires the Collector will, on no account, proceed to the sale of those estates, the sudder jumma of which &c. &c."

Now, are these the expressions of men careless as to the price at which estates sold?—or this? "As regards the lots bearing a jumma greatly disproportionate to the trifling arrears due from them, the Commissioner desires you will either propose for sale a portion of these estates or realize the balances by other measures." (1816.)

Dr. Oldham, again, would score a point from the fact that, in some years, lands put up to sale found no bidders—but why did Dr. Oldham not go on to explain, that this very absence of bidders was seized upon by Government as another excuse for an extension of indulgence to defaulters, an indulgence at all times too liberally extended. A letter from the Board dated September 26, 1818, contains the following:—"The estates which have been held kham in consequence of finding no bidders may be returned to their proprietors as the balances have been recovered." This was grossly illegal, I confess, but was there any cruelty to the landowner in a procedure which extended the days of grace indefinitely, and which permitted the restoration of a forfeited estate, whenever the recusant might be pleased to pay up the revenue he had been wilfully withholding? Dr. Oldham, it appears to me, is in error when, from a single instance, he would argue an universal procedure, or, with a high hand, distribute the villainy of a Deokmudun over the administration of half a century. The Records of the Province,

of which Dr. Oldham writes, do not bear him out in his statements unless single cases of hardship, provoked by the obstinate contumacy of zemindars, are to outweigh the hundreds of cases in which the revenue authorities, by severely straining the spirit of the law, extended an indulgence quite unjustified by the circumstances of default or the character of the defaulters.

The "special report" mentioned so often by Dr. Oldham as being conspicuously absent in all the cases of sales of land up to 1817, although required to legalize such sales, is, I find, referred to more than once in correspondence before that date. In 1813, an estate was placed under kham management, and, at the end of two years, "not a single fraction of a rupee had been paid into the public treasury" (Board of Commissioners to G. G. in C. July 20, 1813), the Board therefore referred for an opinion to the Governor General, who took council of the Sudder Dewanny, and the Board were authorized to exercise the discretion vested in them of selling the estate. Here then we have both "wilful embezzlement," *i. e.*, "misappropriation of funds arising from the produce," and also, the "special report," and, therefore, a legal sale even by Dr. Oldham's showing. But Dr. Oldham throughout his paper appears to think that a Collector *had the power* to sell an estate—which he had not. It is true that he went through the form of selling 100, or more estates a month, but the three or four estates *confirmed in sale per annum* had all to be specially reported upon, *and were specially reported upon*. In 1814, the Collector of Benares is specially reminded that, without such a report, confirmation of sale is impossible, and again, in the same year, he is censured for not having submitted such report. Unless the submission of this "special report" had been the rule, would the omission of it have been remarked upon? The inference certainly is, that it would not, and, as a matter of fact, I would not hesitate to say, that no sale was confirmed until the Collector had fully reported and the Board deliberately considered the circumstances of default.

Again, Dr. Oldham devotes a large part, several pages of Section IV of his Note, to the wrongs suffered by honest putteedars when their coparcenars were in default. But he does not state the all-important fact that it was at all times in the power of those Putteedars to claim, and by the simple act of registration to establish, the partition of the estate and their own individual and separate recognition as sharers in that estate liable only for the jummas assessed on their respective shares! The obstinacy with which the inferior putteedars refused to avail themselves of this safeguard and privilege is forcibly put forward by Mr. Salmon in the letter above quoted and compels us to withhold all sympathy from them when their obstinacy brought about its inevitable results.

Dr. Oldham's sympathies are those of Mr. Jonathan Duncan, but he has not the same excuse for them. Mr. Jonathan Duncan, "the Legislator of the Province" was at all times moderate and, sometimes, moderate to a fault. To his moderation, his hesitation lest he should hurt Hindoo feelings, our abkarry system owes its first official existence, just as to his moderation, his fear lest the Syngthers should draw their swords upon him, the Lucknessur of 1810 owed the troubles that should have fallen on the Lucknessur of 1790. The spoilt children of Russerah, Chit, Secunderpore and Bulleah had all to be whipped by Mr. Duncan's successors, for though the whip was made by Mr. Duncan himself it was put by "in the cupboard and the bad boys of the Benares family having been given everything they cried for were moderately contented for a while. It is to this period that Dr. Oldham looks back as the Golden Age of Benares, but it is impossible to read dispassionately the records of Mr. Duncan's Proceedings" without feeling that he was bequeathing a legacy of trouble, storing up whirlwinds for his successors if these should happen to be men who would not, on sentimental grounds, brook the triumph of banded breakers of the law or allow impunity to Zalim Singhs. Mr. Duncan's caution was, however, hardly cowardice, for he had not the strength to punish. So that "the Rajpoot whose character it is never to concede a point of any kind," so much admired by Dr. Oldham, found a place in the antediluvian India, before the land had been measured or armies formed, and when Mammoth-Tehseeldars and pterodactyle outlaws straddled and coursed over the inchoate Province. But such a Rajpoot can have no place under an orderly government, unless a place is also to be found for the Choctaw India. His character also it is "never to concede a point of any kind." The latter, however, is disappearing with the elk whose forests his father shared, and the Rajpoot of Mr. Duncan's day, unless he changes the 'character' Dr. Oldham has given him, must disappear also—as his father's mud forts have disappeared or the tigers that roamed in the jungles that once screened Sultanat Singhs from justice. Against the primeval Rajpoot, therefore, Mr. Duncan stayed his hand for, in the first place, he was afraid to strike and, in the second, he had not the will to hurt. Dr. Oldham's sympathies also are with the Rajpoots. He fears their revenge—the revolt of Ghazeepore is foretold on page 42 of the Memoir—and would remove the incentives thereto. This revolt is, of course, a possible contingency just as, in Grimm's story, was the falling of the hatchet from the cellar beam on the head of Franz's grandson. But Franz was not even a father when his wife foretold the calamity, and the neighbours were therefore, perhaps, justified in the rudeness of cackling at the prediction.

Towards Dr. Oldham's sympathy, the very Christian desire to see the skeins of injustice unravelled, it is impossible not to feel all respect. But the injustice of which he complains is of modern growth. It does not strike roots into the far past. The sale of ancestral property may have now become deplorable, but, fifty years ago, it was neither frequent nor illegal, and where Dr. Oldham would shine a Cid, he shows a field only, a Don Quixote. He bestrides Rosinante not Babieca: his distressed knights are really hand-cuffed convicts.

It is hardly necessary to point out the very unpractical character of Dr. Oldham's concluding suggestions. These may be briefly summed up thus—that the Zemindars whose estates were sold in the early part of the century should now be restored to their lands. But as the illegality of those sales has not yet been proved, it is difficult to appreciate the justice of such a proposition.

Why does not Dr. Oldham turn his attention to a really glaring illegality which is apparent throughout the records of the Benares Province—the illegal extension of indulgence to defaulting Zemindars? It was ordered in 1832 by the Sudder Board of Revenue that Collectors were not to allow more than a month's grace to defaulters after their estates were sold. This order was regularly disobeyed by the Collectors, for, of the hundreds of sales cancelled, quite half were redeemed by Zemindars after the legitimate period had expired, and, if the administration of the past is now to be corrected, as Dr. Oldham advises, it will be necessary to find out the heirs of the original purchasers of the estates illegally redeemed, to offer them the refusal of these estates, and, on their declining, to repay to the heir of the original proprietors the amount of the balance illegally received from their forefathers, and again to expose the estate to sale by auction!

But to recommend such "justice" seriously would be a burlesque on the records of a most noble administration and a travesty of statesmanship.

Before concluding I would briefly refer to a very special circumstance which ought, I think, to have special importance attached to it in any consideration of the Ghazee-pore district. I refer to the very exceptional character of the Ghazee-pore Zemindars. The ruffianly land-owning tribes of that district—the Rajpoots of Chit, the Leynguhers of Sucknessur, the men of Secunderpore and Zamaueca—whom neither Rajas, Residents, nor Collectors of Benares have been able to coerce into subordination; to law, have been notorious from the very earliest history of the country for their constant and unprovoked turbulence. During the Mutiny of 1857 they crowned their infamy. The character of these men is of itself amply sufficient to explain even more "disgraceful outrages" than Dr. Oldham can enumerate, for, to be disgracefully outrageous;



has been their policy from first to last, and it is an open question whether the advice of the barbarous but honest old Tehseeldar with regard to similar tribes in Anglee, as recorded above, is not preferable to Dr. Oldham's. The country could well spare the hereditary law-breakers of Ghazeepore.

I have before now used my pen in the daily press to oppose those who see no mischief, no wickedness, in the ejection of land-owners under the paltry decrees of Civil Courts under the present laws and, if only from the jealousy I feel for a cause I have once spoken for, I would protest against the tone of Dr. Oldham's championship of it—protest against the attempt to support a strong case by weak argument based on the procedure of past administrations, I would even go to the extreme length of that settlement officer who advocated, a year or so ago, the Government right of pre-emption and a recourse to disastrous kham administrations rather than acquiesce in a policy that gives us the mahajun or upstart vakeel in the place of the more ignorant, but quasi-hereditary zemindar, but I recognise neither expediency nor morality in throwing back our own sins upon the third or fourth generation of our predecessors. It may be symmetrical in an argument to contend that, from 1774 to 1874, revenue administration has been sliding along in a groove of impolitic illegality and cruelty, but it has little truth and less honesty „to recommend it.

The labour which Dr. Oldham has expended on his work, and the very noble spirit of benevolence in which it was undertaken cannot be magnified by the mere expression of admiration, and, indeed, I should have hesitated to come forward in opposition to opinions that had been expressed by so weighty an exponent, knowing as I did that the circulation and, therefore, the influence of a pamphlet on so severe a subject must be very limited, the more so, as it carried in its unpractical and impracticable conclusion the elements of self-destruction (as a scorpion carries in its tail the instrument of suicide) had not the daily press, startled by the magnitude of Dr. Oldham's figures, the serious import of his charges and the earnestness of his language, while unable to gauge the value of his illustrative cases, echoed his sentiments and quoted his more striking passages, and when Error thus threatens to become popularized it is the duty of those who can lay their hands on Ithuriel's spear to prick the toad.

PHIL. ROBINSON.









